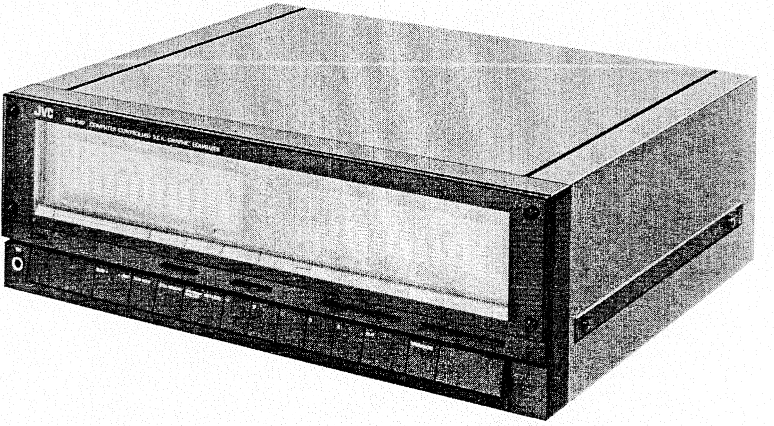
JVC

SERVICE MANUAL

COMPUTER CONTROLLED S.E.A. GRAPHIC EQUALIZER

MODEL SEA-M9B



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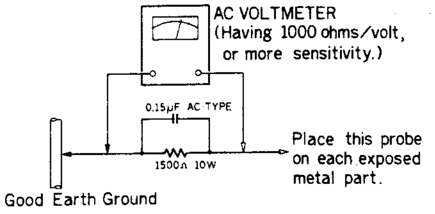
This manual combines two single volumes, Service manual and Parts list.

No.2745
Aug. 1984

afety Precautions

The design of this product contains special hardware, many circuits and components specially for safety purposes.
For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.

5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15μF AC TYPE
1500Ω 10W
Place this probe on each exposed metal part.
Good Earth Ground

:HECKING YOUR LINE VOLTAGE (Except for U.S.A., Canada, Australia, U.K. and Continental Europe.)
iefore inserting the power plug, please check this setting to see that it corresponds with the line voltage in 'our area. If it doesn't, be sure to adjust the voltage selector switch to the proper setting before operating this quipment. The voltage selector switch is located on the rear panel.
:AUTION Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.

1. Specifications

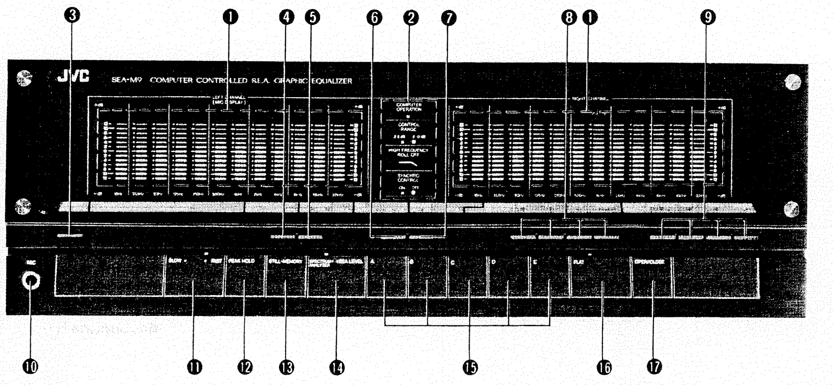
Input section	
SEA INPUT	: Input impedance 47 kohms
TAPE-1	: Input impedance 47 kohms
TAPE-2	: Input impedance 47 kohms
Output section	
SEA OUTPUT	: Output impedance 100 ohms
TAPE REC	: Output impedance (SEA REC) 100 ohms
Rated output	: 2 V RMS (SEA SYSTEM FLAT)
Max. output	: 5 V RMS (SEA SYSTEM FLAT)
Total harmonic distortion	: 0.003 % (20 Hz – 20 kHz, rated output)
Intermodulation distortion	: 0.003 % (SEA SYSTEM FLAT)
Gain	: SEA DEFEAT 0 dB SEA ON 0 dB ATTENUATOR ON -6 dB
Frequency response	: 10 Hz – 100 kHz (+0, -2 dB)
S/N ratio	: 118 dB (at rated output, IHF A-network short-circuited)
Control section	
SEA center frequency	: 16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, 32 kHz
Pink noise section	
Output	: 35 mV
Microphone amplifier section	
Matching microphone sensitivity	: More than -72 dB
Matching microphone	
Output impedance	: Less than 1 kohm
General	
Dimensions (W x H x D)	: 435 x 149 x 377 mm
Weight	: 10 kg net (excluding carton)
Accessories	: Connection cord (1.2 m) . . . . 2 Condenser microphone MU-M9 . . . . 1 Microphone holder . . . . . 1 Battery R-6/AA/UM-3 . . . 1

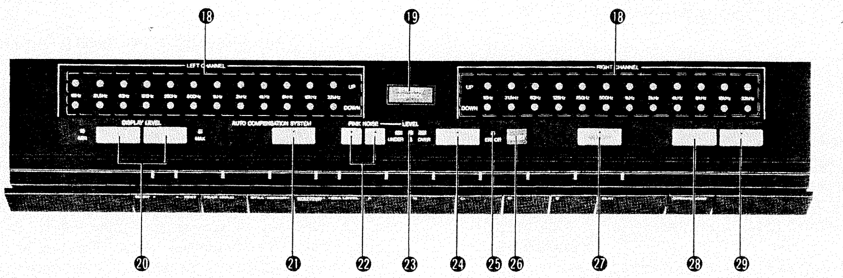
Design and specifications subject to change without notice.

POWER SPECIFICATIONS

	U.S.A. & Canada	Europe, U.K. & Australia	Other area
Power Supply	AC 120 V ∿, 60 Hz	AC 110/120/220/240 V∿ selectable, 50 Hz	AC 110/120/220/240 V∿ selectable, 50/60 Hz
Power Consumption	35 watts	40 watts	40 watts
Power Outlets	Fitted	Not fitted	Fitted
Line Voltage Selector	Not fitted	Fitted	Fitted

Names of Parts and Their Functions





PLAY

ws the audio spectrum, SEA level and SEA compen- ɔn level (for compensation of room acoustic, etc.).

CTRUM ANALYZER display: The output signals analyzed for 12 frequency bands whose center fre- ncies are identical to those of the 12 S.E.A. controls. ; indicator shows the output signal level for each |uency band. When connecting a microphone to MIC jack, the sound picked up by the microphone ıown by the SPECTRUM ANALYZER display.

\ LEVEL display: Shows the SEA level when the :CTRUM ANALYZER/SEA LEVEL button ⓮ is ;sed. Either of the two LEDs above this button lights how which display is being shown.

\ compensated level display: The SEA compensated ·l is shown after automatic room acoustic analysis compensation.

)ICATOR

MPUTER OPERATION: Flashes during automatic m acoustic analysis and compensation.

HIGH FREQUENCY ROLL OFF: Lights when the HIGH FREQUENCY ROLL OFF button is pressed to ON.

CONTROL RANGE & SYNCHRO CONTROL: CONTROL RANGE ±6 dB or ±12 dB and SYNCHRO CONTROL ON or OFF are shown.

❸ POWER button

ON (▬): Press to turn the power on. After about 5 seconds this unit starts to operate.

STAND BY (▬): Set to this position to turn the power off.

Note:

- Even when the POWER button is off, this unit consumes a small amount of electricity (0.1 watt) to maintain the memory data.

❹ HIGH FREQUENCY ROLL OFF button

ON (▬): Press to this position to attenuate the frequency response from 4 kHz and over smoothly (-3 dB/oct).

OFF (▬): Normally set to this position.

❺ ATTENUATOR button

-6 dB (▬): Press this button to this position to attenuate the input level when performing live recording of a performance with a wide dynamic range or playing a tape with a high recording/playback level.

0 dB (▬): Normally set to this position.

❻ SEA button

DEFEAT (▬): To bypass the SEA circuit.

ON (▬): Set to this position to listen to SEA-compensated signals.

❼ SEA REC button

ON (▬): Set to this position to record SEA-compensated signals.

OFF (▬): Set to this position to record tapes bypassing the SEA circuit.

❽ RECORDING SELECTOR

SOURCE: Press this to record the source connected to the LINE IN terminals.

1 ► 2: Press this to dub from TAPE-1 to TAPE-2.

2 ► 1: Press this to dub from TAPE-2 to TAPE-1.

OFF: Press this when not recording.

❾ LINE OUT SELECTOR

SOURCE: Press this to play the source connected to the LINE IN terminals.

TAPE-1: Press this to play TAPE-1 deck.

TAPE-2: Press this to play TAPE-2 deck.

REC SIGNAL: Press this to monitor the recording of the source selected with the RECORDING SELECTOR.

❿ MIC jack

⓫ SLOW/FAST button

Use to select the fast or slow response time of the SPECTRUM ANALYZER indicator.

⓬ PEAK HOLD button

When the SPECTRUM ANALYZER indicator is shown and this button is pressed, peak values are shown and held. When a signal higher than the one shown is input, the indication changes to the higher level.

⓭ STILL-MEMORY button

Press to set to on to hold the SPECTRUM ANALYZER display; the LED above this button lights.

⓮ SPECTRUM ANALYZER/SEA LEVEL button

Press to select the SPECTRUM ANALYZER display or SEA LEVEL display.

⓯ A.B.C.D.E. buttons (5-preset memory system)

5 SEA frequency patterns adjusted separately for left and right channels can be stored in memory.

To store an SEA pattern, first press the MEMORY button ㉗ then one of these buttons A – E.

To recall the pattern stored in memory, press one of the buttons A – E as required.

⓰ FLAT button

Press this button to make the SEA frequency response flat. The indicator above this button lights.

⓱ OPEN/CLOSE button

Press to move the drawer in and out.

⓲ SEA UP/DOWN buttons

The SEA-M9B graphic equalizer divides the audio spectrum from 16 Hz to 32 kHz into 12 frequency bands having center frequencies at intervals of one octave.

The response in each band can be varied by ±12/±6 dB (selected by CONTROL RANGE button), by scanning using the UP and DOWN buttons.

16 Hz: This frequency range is felt rather than heard. Effective in reducing very low frequency noise and intermodulation distortion caused by record surface warps. Lowering this band obtains the same effect as a sub-sonic filter.

31.5 Hz: Reproduce the very low bass sound by raising the band obtaining that solid and substantial "being-there" feeling. When lowered, it functions as low-cut filter and eliminates hum and rumble.

63 Hz: Raise to emphasize the very low bass response of organs, drums, and contrabass. It produces stable and solid sound by raising the band and eliminates the unclear sound response of low frequencies by lowering the band.

125 Hz: Raise the band to obtain a more expanded low sound. Lower the band to eliminate unclear sound caused by large spaces in listening rooms.

250 Hz: Lower the band to reduce the reflected sound in a live listening room or to eliminate unclear sound caused in small listening rooms.

500 Hz: This frequency range is the base on which music is constructed. Raise this band to really put a punch in your music.

1 kHz: Most effective in emphasizing or de-emphasizing the human voice. Raise the band to cause the vocalist to be brought to the foreground, or lower for causing it to recede into the background.

2 kHz: This frequency stimulates the human ear. If the music sounds hard or metallic, lower the band.

4 kHz: Raise this band slightly so that the tension of strings can be sensed and a vigorous sound reproduction can be obtained. Lower the band to obtain more fatigue-free listening.

8 kHz: Boost to add clarity to winds and strings. This band varies the tonal expression, influencing the subtleties of the music.

16 kHz: Boosting this frequency range properly adds to the delicacy of highs, with cymbals and triangles resounding in a more ear-pleasing manner, and provides a feeling of extension. This band can also be used to compensate for cartridge response since most moving magnet cartridges have their resonance peaks in the frequency range from 10 kHz to 20 kHz.

32 kHz: High frequencies exceeding audible frequency range. Use this band to control extremely delicate sound or to cut unnecessary super-high sound.

YNCHRO CONTROL button
ress this button to ON so that the SEA levels of both hannels can be controlled by pressing the SEA UP/ OWN buttons of either channel; the LED indicater ights.

ISPLAY LEVEL UP/DOWN buttons

IIC button
ress this button to ON to check the room acoustic vith a microphone or to observe the spectrum of an nstrumental, vocal, etc.; the LED indicater lights. The pectrum indication is shown for the left channel and an rrow (⊂⊃) for the right channel. (Mic mixing is mpossible because the sound from the microphone oes not come out from the speakers.)

INK NOISE buttons
- : To output the pink noise from the left speaker.
- : To output the pink noise from the right speaker.

INK NOISE LEVEL indicator

㉔ **START button**
Press to start the analysis for automatic compensation.

㉕ **ERROR indicator**

㉖ **RESET button**
To stop the automatic compensation in the middle of processing.

㉗ **MEMORY button**
Press to store the SEA frequency response pattern in memory before pressing one of the 5-preset memory system buttons; the indicator LED in the button lights.

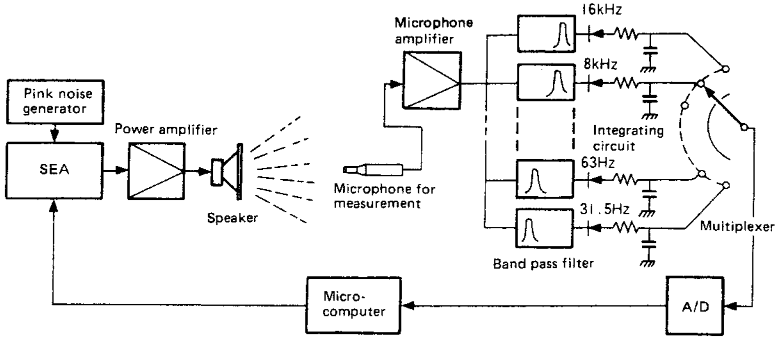
㉘ **CONTROL RANGE button**
Press to select the SEA range (±6 or ±12 dB).

㉙ **REVERSE button**
Press to reverse the SEA frequency response by a single operation; the indicator LED in the button lights momentarilly.

Explanation of Technology

1) Automatic Compensation for Room Acoustics

tomatic compensation means to compensate the sound d, especially the transmission frequency characteristics, omatically according to the acoustic characteristics of listening room.


Pink noise generator
SEA
Power amplifier
Speaker
Microphone amplifier
Microphone for measurement
16kHz
8kHz
Integrating circuit
63Hz
31.5Hz
Band pass filter
Multiplexer
Micro-computer
A/D

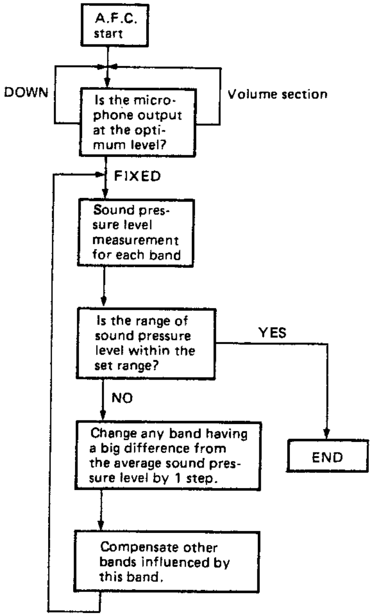
(Construction of automatic compensation system for room acoustics)

First, output pink noise and pick it up by the microphone used for measurement to measure the average sound pressure level at all frequencies. During this time, connect the SEA unit with a flat setting between the pink noise generator and the power amplifier.

Next, measure the sound pressure level of each frequency band and compensate the frequency characteristic by raising the level for frequencies with a lower than average sound pressure level and lowering for frequencies with a higher level. Perform compensation to make the frequency characteristic flat by repeating the operation and performing fine correction.

This is an outline, more detail will be given in the operation section. Press the START button to set the automatic room acoustic compensation mode. In this case, output the pink noise from this unit through the speakers and measure the average sound pressure level at all frequency ranges (each frequency band) by picking up the pink noise by the microphone used for measurement (provided).

By this, the optimum level is shown by adjusting the microphone input level. If it is UNDER, raise the volume of the amplifier and if it is OVER, lower it. When the microphone input level is at optimum level, compensation for room acoustic has been completed.

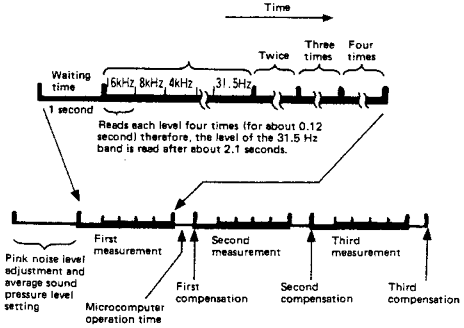

A.F.C. start
DOWN
Is the micro-phone output at the opti-mum level?
Volume section
FIXED
Sound pres-sure level measurement for each band
Is the range of sound pressure level within the set range?
YES
NO
Change any band having a big difference from the average sound pres-sure level by 1 step.
END
Compensate other bands influenced by this band.

Measure the average sound pressure value and find a band having a big absolute difference from the average value then compensate it by 1 step so that the absolute value of this band becomes smaller.

In this case, since other bands are influenced by compensating this band, make corresponding compensations for other bands. After this, repeat compensation until the sound pressure level in each frequency range is within the set range.

Sound pressure level compensation has three ranges; rough compensation (within ±3 dB), medium compensation (within ±1.5 dB) and fine compensation.

Since pink noise has a greater amplitude at lower frequencies, the Q of the band pass filter is set to be lower and the detection output voltage is stabilized by increasing the time constant.


Time
Waiting time
16kHz 8kHz 4kHz 31.5Hz
Twice
Three times
Four times
1 second
Reads each level four times (for about 0.12 second) therefore, the level of the 31.5 Hz band is read after about 2.1 seconds.
Pink noise level adjustment and average sound pressure level setting
First measurement
Second measurement
Third measurement
Microcomputer operation time
First compensation
Second compensation
Third compensation

(How to measure the sound pressure level at each frequency)

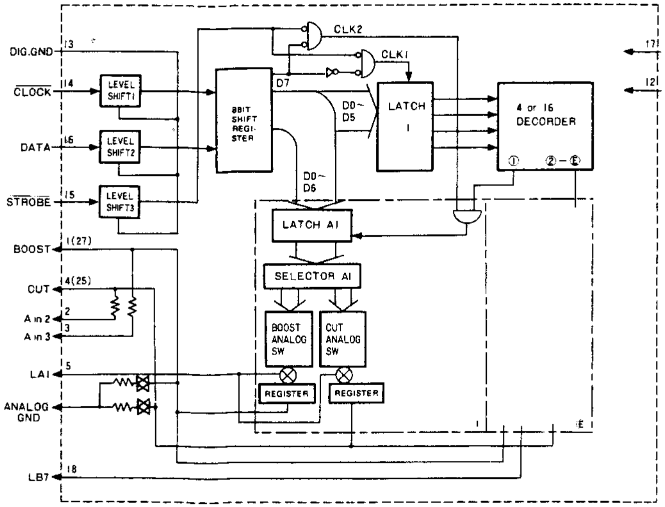
2) ICs developed for SEA (LM835)

835 is a high-precision SEA LSI IC developed exclusive- for this unit. 24-step graphic equalization is possible by iding the frequency range into 14 bands (12 bands are d for this unit) which each have a ±12 dB/±6 dB gain ge.

s is composed of the logic input section from the ıtrol CPU (data, strobe, clock) and signal path section ısisting of high-precision SiCr (silicon chrome) resistors ! low distortion analog switches.

function is the selection of gain by sending 8-bit serial a II after sending 8-bit serial data I and selecting the quency.

Pin. No.	Mnemonic	Operation
①, ㉗	BOOST	SEA volume boost output terminal
②, ③	A in 2 A in 3	Distortion cancel terminals
④, ㉕	CUT	SEA volume cut output terminals
⑤–⑪	LA1 – LA7	SEA volume 16 Hz (LA1) – 500 Hz (LA7) terminals
⑫	Vss	-8.2 V
⑬	DIG.GND	DIGITAL Ground
⑭	CLOCK	Clock input terminal for data input
⑮	STROBE	Strobe input terminal
⑯	DATA	Data input terminal
⑰	V_{DD}	+8.2 V
⑱ – ㉔	LB7 – LB1	SEA IC/of 1 kHz (LB1) – 32 kHz (LB5) terminal
㉖	A in 6	Input terminal of SEA amplifier output
㉘	ANALOG GND	ANALOG.GND


DIG.GND
CLOCK
DATA
STROBE
BOOST
CUT
A in 2
A in 3
LA1
ANALOG GND
LB7
13
14
16
15
1(27)
4(25)
2
3
5
18
17
12
+8.2V
−8.2V
LEVEL SHIFT1
LEVEL SHIFT2
LEVEL SHIFT3
8BIT SHIFT REGISTER
CLK2
CLK1
D7
D0~D5
D0~D6
LATCH I
4 or 16 DECORDER
① ②–Ⓔ
LATCH AI
SELECTOR AI
BOOST ANALOG SW
CUT ANALOG SW
REGISTER
REGISTER
I
Ⓔ

(3) Pink Noise

ıis unit has a built-in pink noise generator which gener- ɘs pink noise by passing white noise generated from the -bit digital noise generator (MM5437) through a 3 dB/ t L.P.F. (Low Pass Filter).

ıis generator prevents unnecessary noise from being ıerated by sending the control signal to MM5437 and ɔpping its operation.

3-(4) Membrane Switch PCB
(ENC-006; Drawer section switch PCB)

This is click membrane switch PCB with 70 spacers and 70 metal diaphragms and patterns on both sides.

As this PCB has a delicate structure, take care the following points when handling it.

(1) Do not push the diaphragms (6 mm dia. phosphor-bronze discs) with your fingers. (If it is pressed too far, its elasticity cannot be restored. If it is necessary to push them, push with a device with a sharp edge such as a ball pen).

(2) Do not damage or tear off the film sheet. (It may become impossible to deplace.)

(3) When replacing the IC or other parts, use one with the same size. (Since this unit is thin, it is impossible to install large replacement chips.)

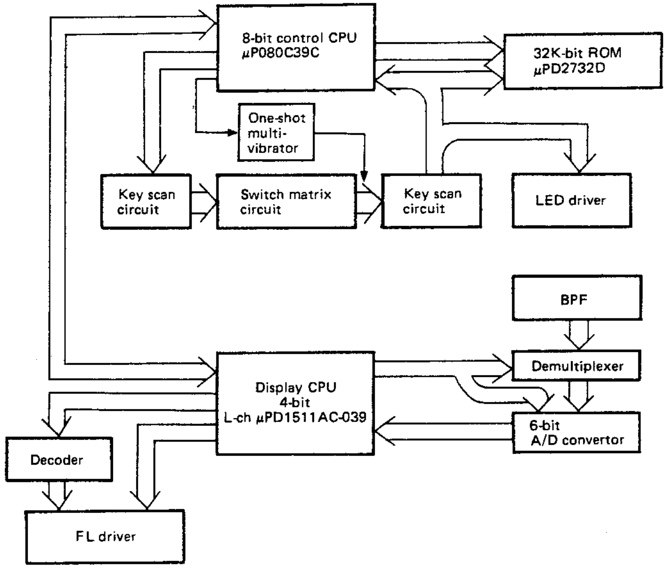
(4) Concerning switch contact defects on their own (when deformation of diaphragm cannot be restored, etc.), the replacement of only the switch is impossible. In this case, as replacing the PCB is needed, consult a JVC dealer.

3-(5) FL Circuit

This circuit uses a 4-bit microcomputer to show the spectrum analysis and SEA curve using a fluorescent display (FL). The data from the 8-bit control CPU is sent to the 4-bit microcomputer which sends the data of 12 bands/ 13 steps to the FL driver then the SEA curve is shown by the FL.

On the other hand, concerning the spectrum analysis, the signal having passed through the B.P.F. is passed through the demultiplexer then the 6-bit microcomputer acting as an A/D convertor. Then this data is input to the 4-bit microcomputer. After this, the spectrum analysis is shown by the FL like the SEA curve.

The arrow indication of the R-ch in the MIC mode is controlled by a 4-bit microcomputer. The level detection circuit of 10 frequency bands from 31.5 Hz to 16 kHz is in the L-ch FL circuit and the data is sent to the control CPU.


8-bit control CPU
μP080C39C
32K-bit ROM
μPD2732D
One-shot multi-vibrator
Key scan circuit
Switch matrix circuit
Key scan circuit
LED driver
BPF
Demultiplexer
Display CPU
4-bit
L-ch μPD1511AC-039
6-bit
A/D convertor
Decoder
FL driver

(Block diagram of microcomputer peripheral circuits)

3-(6) Drawer Motor Drive Circuit

The motor drive IC (IC007: BA6208) has the input/ output characteristic shown in the table on the right.

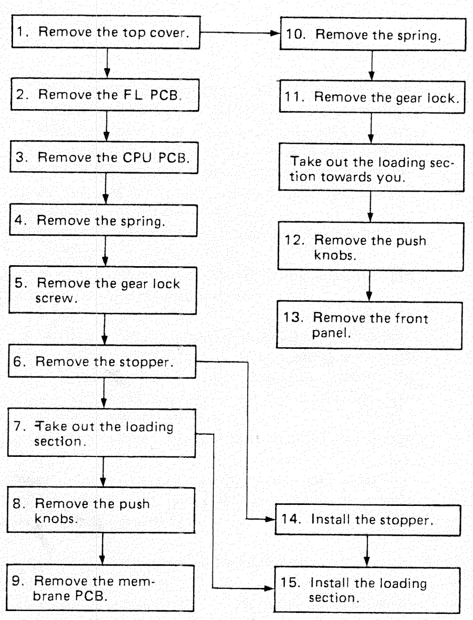
The normal or reverse rotation of the motor is performed by the D flip-flop in IC004 (1/2 TC4013BP).

When the drawer is moved in or out, the excess current of the motor is detected at Q001 and when inputs to pins 2 and 3 of IC006 (μPD4081BC) from IC005 (1/2TC4013BP) are both 0, the motor is stopped. IC006 functions so that the motor does not operate even if the power switch is set to ON and S181 and IC005 detect if the drawer is in or out when the power switch is set to ON to set the direction the motor should move in next.

Pin 3 input	Pin 2 input	Pin 8 input	Pin 7 input	Motor
1	1	L	L	Stop
1	0	H	L	Normal rotation
0	1	L	H	Reverse rotation
0	0	–	–	Stop

4. Removal Procedures

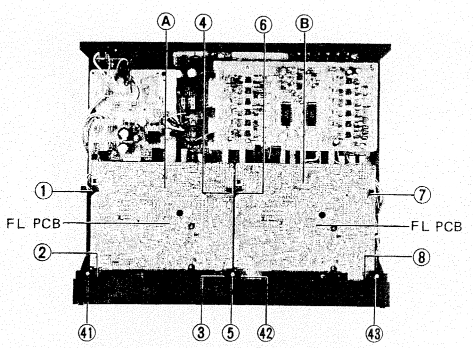
Since this unit is assembled in a specified order, disassemble or reassemble it referring to the flow chart below. Concerning disassembling of other parts, refer to "Exploded View".

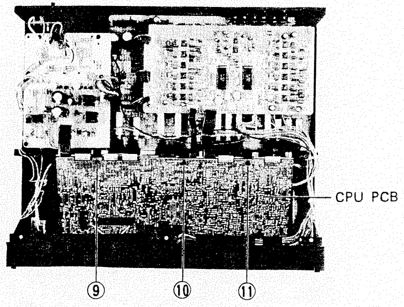

1. Remove the top cover.
2. Remove the FL PCB.
3. Remove the CPU PCB.
4. Remove the spring.
5. Remove the gear lock screw.
6. Remove the stopper.
7. Take out the loading section.
8. Remove the push knobs.
9. Remove the membrane PCB.
10. Remove the spring.
11. Remove the gear lock.
Take out the loading section towards you.
12. Remove the push knobs.
13. Remove the front panel.
14. Install the stopper.
15. Install the loading section.

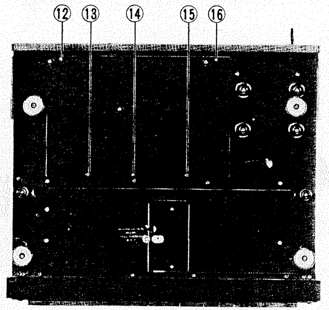
1. **How to remove the top cover**
   Remove the screws (two screws of left and right side panels) on both sides and three screws on the rear panel of this unit.

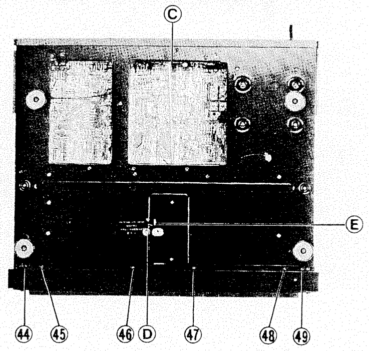
2. **How to remove the FL PCB**
   (1) Remove eight screws ① – ⑧ holding the PCB.
   (2) Take out the FL PCB from the connector by lifting the back portions Ⓐ and Ⓑ of the PCB.

3. **How to remove the CPU PCB**
   (1) Take out three plastic rivets ⑨ – ⑪ holding the PCB.
   (2) Take out 3-pin connector and three flat cards.


Ⓐ
④
⑥
Ⓑ
①
FL PCB
②
⑦
FL PCB
⑧
㊶
③
⑤
㊷
㊸







4. **How to remove the spring**
   (1) Remove five screws ⑫ – ⑯ holding the bottom board.
   (2) Remove part Ⓒ (bonded) to which the spring is hooked.

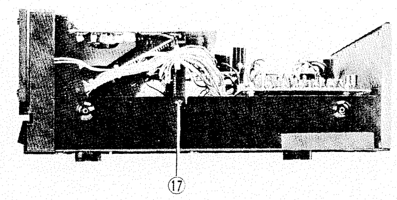
5. **How to remove the gear lock screw**
   (1) Turn the ⊖minus screw of part Ⓓ fully clockwise.
   (2) Draw the rack (rack & pinion) visible on part Ⓔ towards you using a screwdriver.
   (3) The engagement of the rack and pinion will separate and the loading section will move freely.

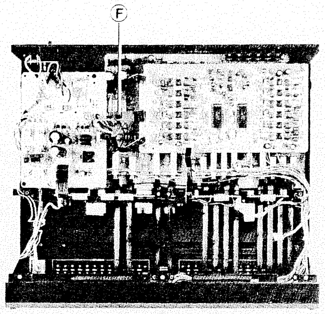
6. **How to remove the stopper**
   (1) Remove the screws (each one on left and right) ⑰ from holes on both sides by holding the loading section pressed in.
   (2) Take out the stopper (⊐ bracket).

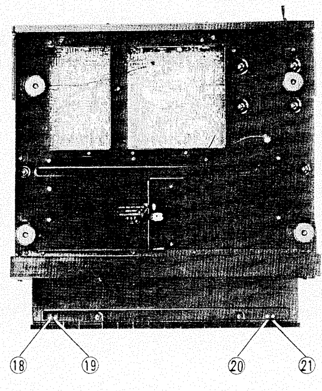
7. **How to remove the loading section**
   (1) Unsolder the ground wire (black) of the motor (Unsolder section Ⓕ)
   (2) Take out three flat cards.
   (3) Take out the loading section towards you (until it stops).
   (4) Take it out by lifting it up slightly.

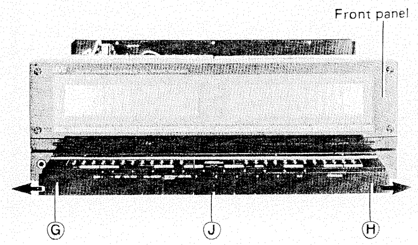
8. **How to remove the push knobs**
   (1) Remove four screws ⑱ – ㉑.
   (2) Slide the escutcheons Ⓖ and Ⓗ on both edges outwards.
   (3) The push knobs are separated into 2 blocks at center part Ⓙ.
   (4) Push up the lower edge of each knob and pull it towards you.
   (5) Take out the right block (or left block) by pulling towards you.

Note: Take care to lose the flat washer provided with each knob because they come off easily.








Front panel
Ⓖ
Ⓙ
Ⓗ

How to remove the membrane PCB

1) Remove nine screws ㉒ – ㉚ holding the cover.
2) Take out 3-pin connector.
3) Remove ten screws ㉛ – ㊵ holding the PCB.
   Screws ㉛ – ㉟ are special screws, ㊱ is a plastic rivet, screw ㊵ is provided with a flat washer and screw ㊳ is a flat head screw.

Note: When installing the PCB, insert the LED into the felt spacer (to prevent leakage of light).

How to remove the spring

Refer to item 4.

How to remove the gear lock screw

Refer to item 5.

How to remove the push knobs

Refer to item 8.

How to remove the front panel

1) Remove three screws ㊶ – ㊸ holding the upper portion of the panel.
2) Remove six screws ㊹ – ㊾ holding the lower portion of the panel.
3) Take out the whole panel towards you.

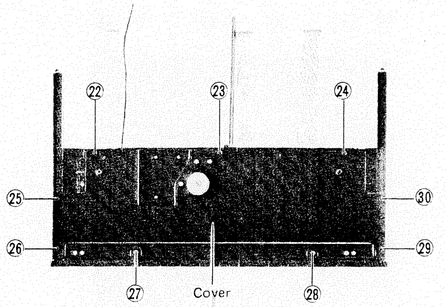
How to install the stopper

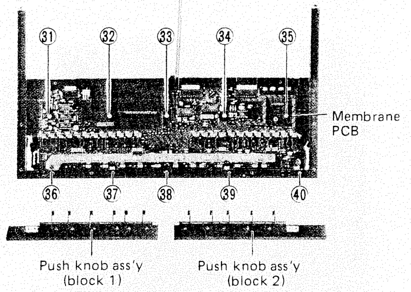
1) Hook the spring. (By this, the tension is always applied but it is possible to take it out freely by hand.)
2) Insert the stopper into the hole in the side rail and fix the screw (refer to item 6).
3) When fixing the stopper, there is a slight play (for installation position). After installation, operate the loading section and make sure that there is no movement to the left and right just before it stops.

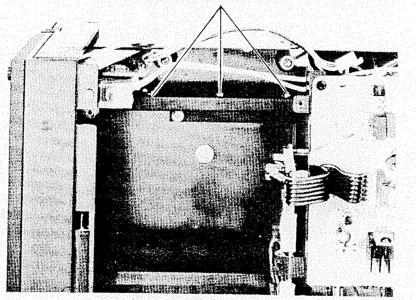
How to install the loading section

(1) Draw ball bearing sections Ⓚ (three on both left and right) fully towards you.
(2) Insert the loading section about 5 cm by putting both ends in the bearing section.
(3) Push the loading section in by pulling the left and right bearing sections towards you using both hands.

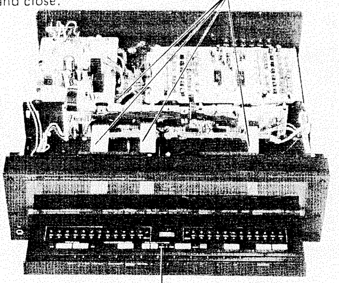
Note: If it is forced in without pressing the bearing section down, the inner most ball will fall out. Make sure to push in the loading section drawing the bearing section towards you.





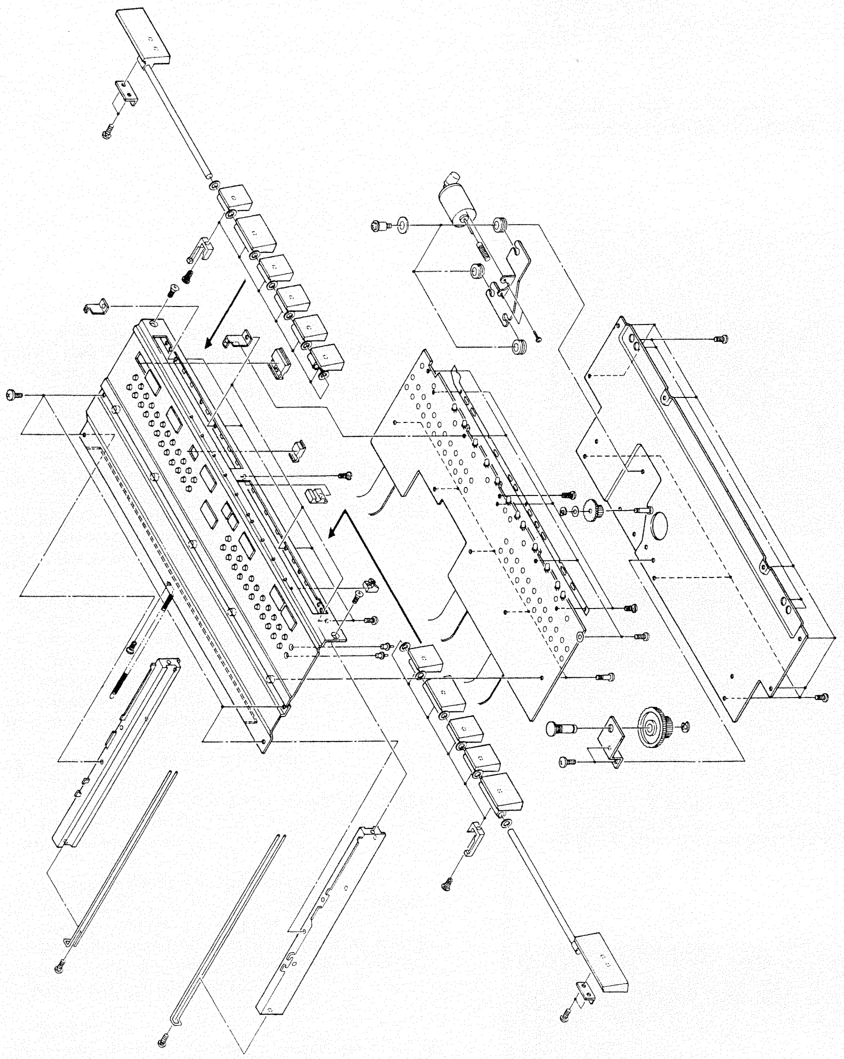


When three flat cards and the black wire of the motor are connected, the loading section will open and close.

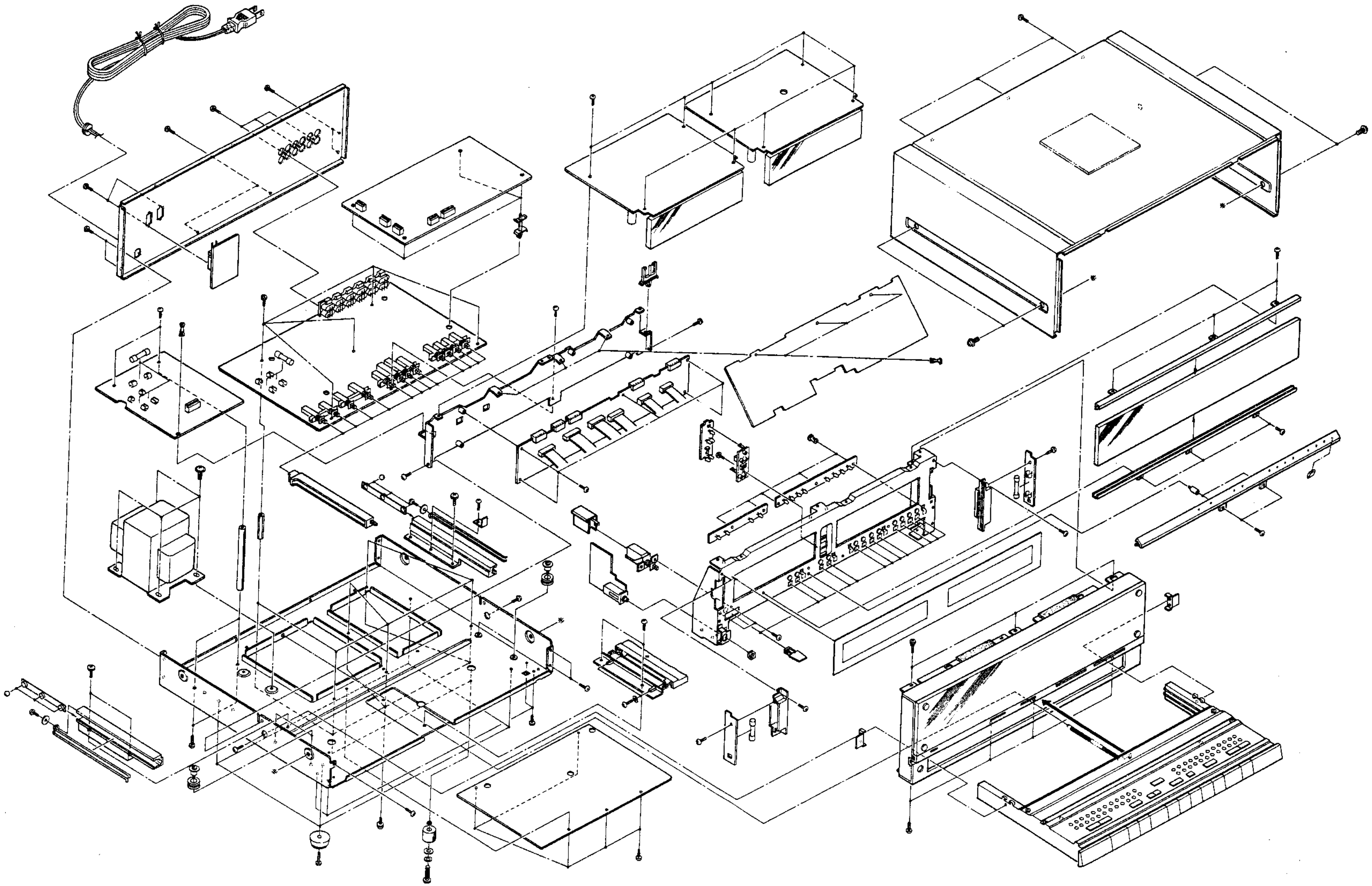


Loading section (when it is taken out to the stopper position).

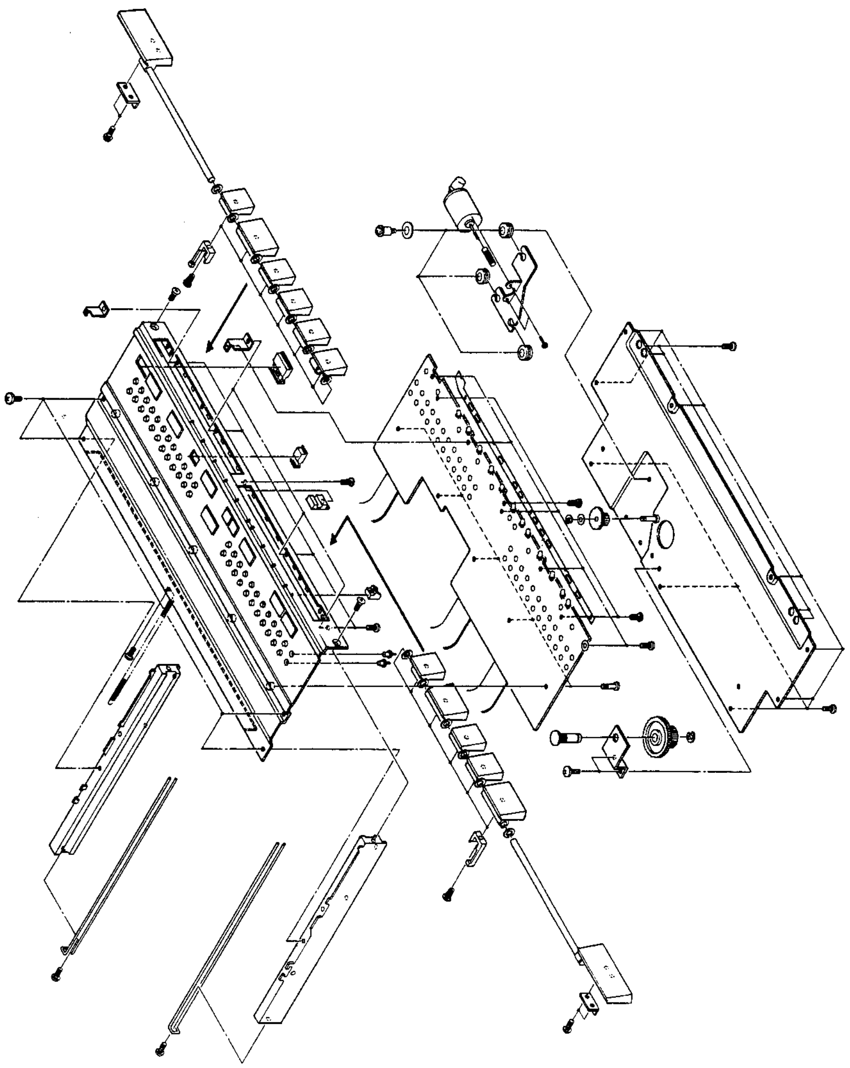
■ Loading Section



5. Exploded View



- **Loading Section**



6. Adjustment Procedures

6-(1) Distortion Adjustment (20 kHz)

- **Adjustment instrument**

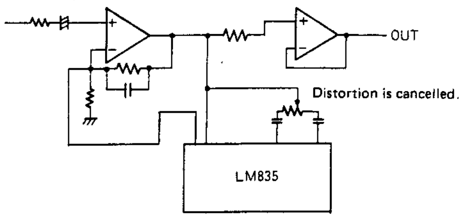
  Philips screwdriver

- **Adjustment**

  Adjust R417 (Lch) and R418 (Rch) so that the distortion at LINE OUT is minimum by inputting a 20 kHz, Vin2V signal to LINE IN.′

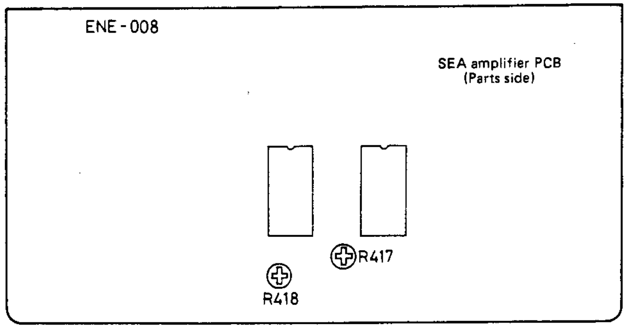
  The distortion should be less than 0.003 % (typ. approx. 0.002 %).

- **Principle**


OUT
Distortion is cancelled.
LM835

- **Three terminal regulator**

  The stable fixed output voltage can be obtained from the non-stabilized DC input voltage without using externally connected parts. An overcurrent limiting circuit and overheating protection circuit are built in.


ENE-008
SEA amplifier PCB
(Parts side)
R417
R418

6-(2) FL Illumination Adjustment

- **Adjustment instrument**

  Philips screwdriver

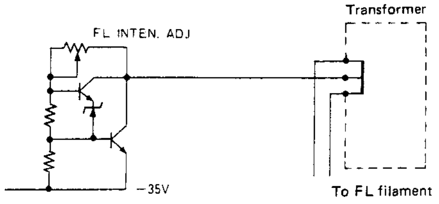
- **Adjustment**

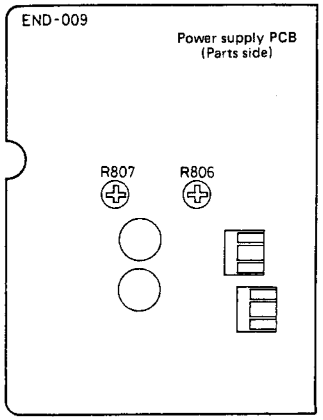
  (1) Set the FL indication to the spectrum analysis mode and input pink noise, etc.

  (2) Turn R806 and R807 fully clockwise. (To make the display brightest)

  (3) Check the brightness of L-ch and R-ch FL displays then adjust the brighter ch brightness to be the same as the darker one.

- **Principle**


FL INTEN. ADJ
Transformer
−35V
To FL filament


END-009
Power supply PCB
(Parts side)
R807
R806

Adjustment Procedures

1) Distortion Adjustment (20 kHz)

Adjustment instrument

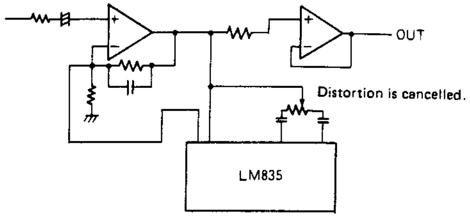
Philips screwdriver

Adjustment

Adjust R417 (Lch) and R418 (Rch) so that the distorion at LINE OUT is minimum by inputting a 20 kHz, Vin2V signal to LINE IN.

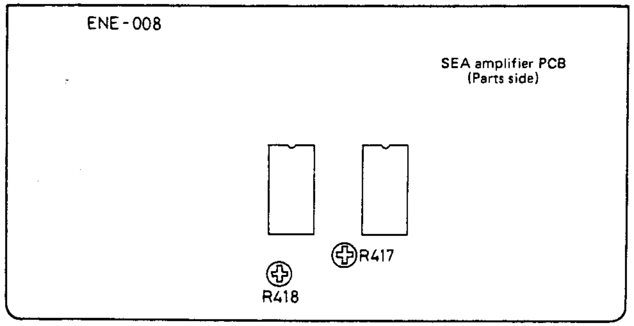
The distortion should be less than 0.003 % (typ. approx. 0.002 %).

- **Principle**


OUT
Distortion is cancelled.
LM835

Three terminal regulator

The stable fixed output voltage can be obtained from he non-stabilized DC input voltage without using externally connected parts. An overcurrent limiting circuit and overheating protection circuit are built in.


ENE-008
SEA amplifier PCB
(Parts side)
R417
R418

2) FL Illumination Adjustment

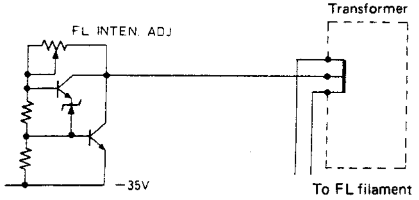
Adjustment instrument

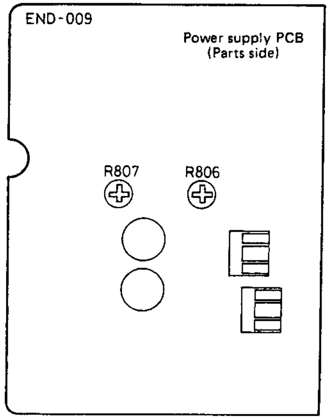
Philips screwdriver

Adjustment

1) Set the FL indication to the spectrum analysis mode and input pink noise, etc.
2) Turn R806 and R807 fully clockwise. (To make the display brightest)
3) Check the brightness of L-ch and R-ch FL displays then adjust the brighter ch brightness to be the same as the darker one.

Principle


FL INTEN. ADJ
Transformer
−35V
To FL filament


END-009
Power supply PCB
(Parts side)
R807
R806

6-(3) Display Level Adjustment

- **Adjusting instrument**

  Ordinary screwdriver (small)
- **Adjustment**

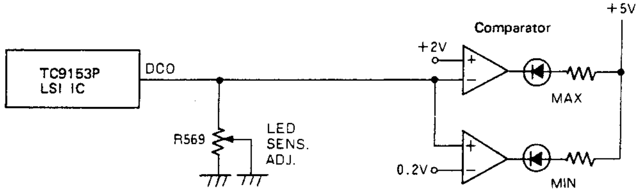
  (1) Set the L and R pink noise generators to ON and the SEA to FLAT then adjust the DISPLAY LEVEL UP-DOWN buttons so that the pink noise level is set to about -10 – -6 dB.

  (2) Adjust R569 of ENF-005-1 so that the MAX LED lights at a level higher than this point.

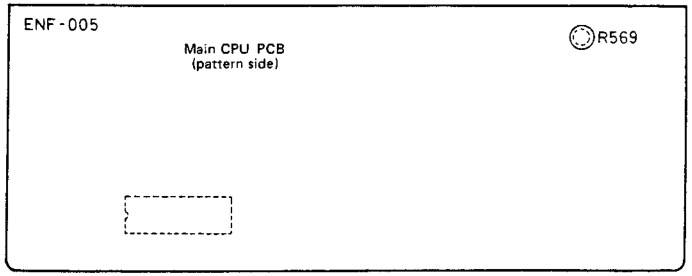
  (3) It is possible to adjust R569 after removing R-ch of FL PCB.

  (4) After adjustment, make sure that the MAX LED goes off by lowering the level by one step by pressing the DOWN button.

- **Principle**

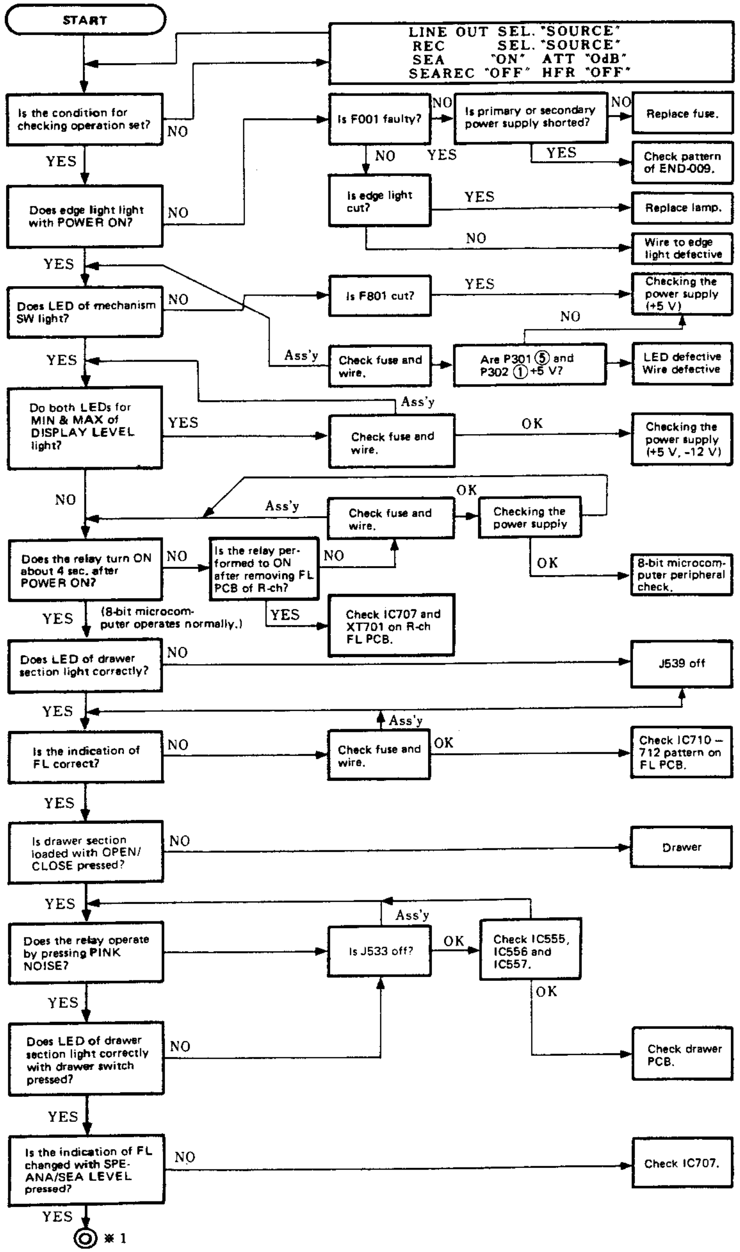

TC9153P
LSI IC
DCO
R569
LED
SENS.
ADJ.
+2V
0.2V
Comparator
+5V
MAX
MIN

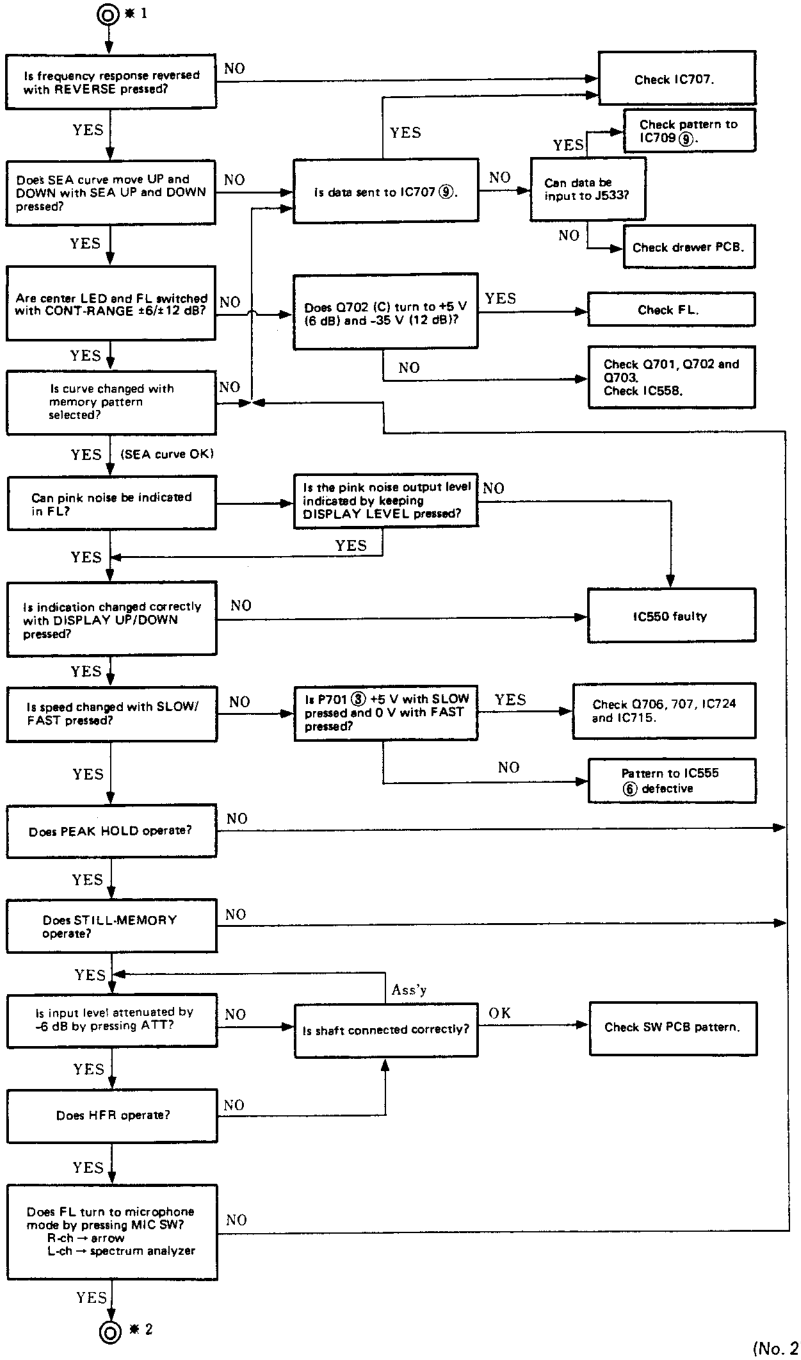
DCO: Changes the 13-step D/A output power to confirm the LSI IC position up to 0 V – 3.5 V max, in stages.

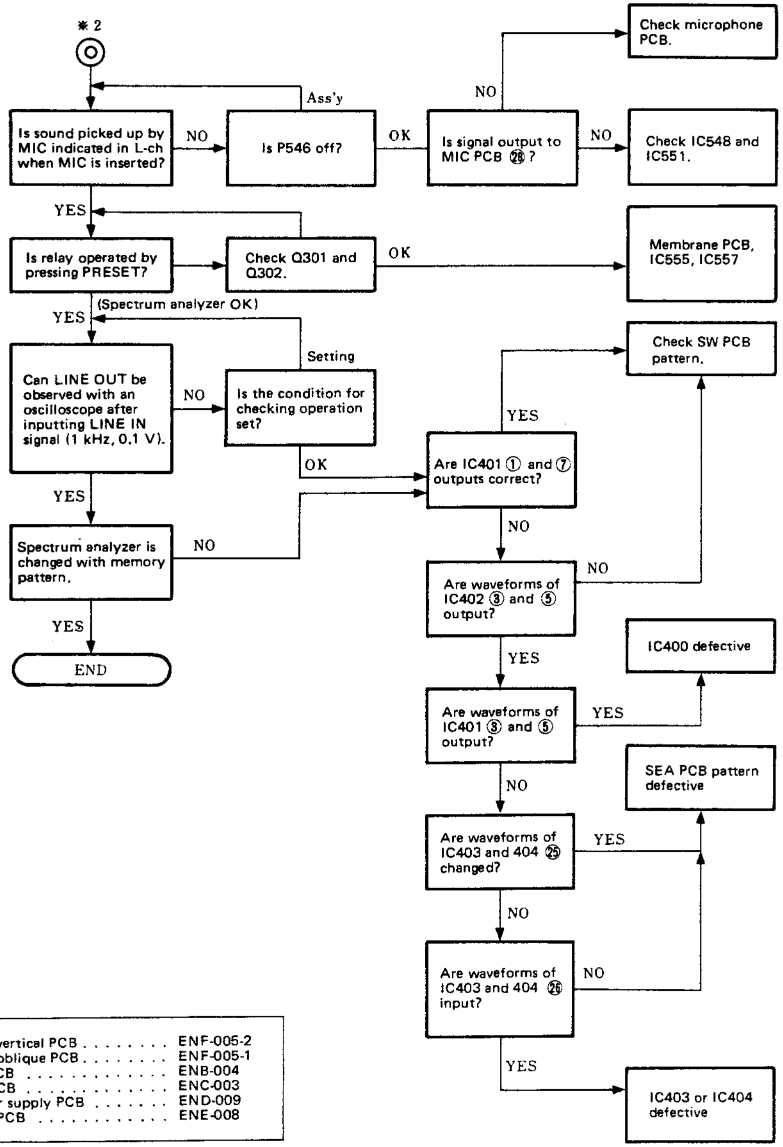

ENF-005
Main CPU PCB
(pattern side)
R569

Troubleshooting

1) General Operations


START
LINE OUT SEL. "SOURCE"
REC SEL. "SOURCE"
SEA "ON" ATT "OdB"
SEAREC "OFF" HFR "OFF"
Is the condition for checking operation set?
NO
YES
Is F001 faulty?
NO
Is primary or secondary power supply shorted?
NO
Replace fuse.
YES
Check pattern of END-009.
Does edge light light with POWER ON?
NO
YES
Is edge light cut?
YES
Replace lamp.
NO
Wire to edge light defective
Does LED of mechanism SW light?
NO
Is F801 cut?
YES
Checking the power supply (+5 V)
NO
Ass'y
Check fuse and wire.
Are P301 ⑤ and P302 ① +5 V?
LED defective Wire defective
YES
Do both LEDs for MIN & MAX of DISPLAY LEVEL light?
YES
Ass'y
Check fuse and wire.
OK
Checking the power supply (+5 V, -12 V)
NO
Ass'y
Check fuse and wire.
OK
Checking the power supply
Does the relay turn ON about 4 sec. after POWER ON?
NO
Is the relay performed to ON after removing FL PCB of R-ch?
NO
OK
8-bit microcomputer peripheral check.
YES
Check IC707 and XT701 on R-ch FL PCB.
YES
(8-bit microcomputer operates normally.)
Does LED of drawer section light correctly?
NO
J539 off
YES
Ass'y
Is the indication of FL correct?
NO
Check fuse and wire.
OK
Check IC710 – 712 pattern on FL PCB.
YES
Is drawer section loaded with OPEN/CLOSE pressed?
NO
Drawer
YES
Ass'y
Does the relay operate by pressing PINK NOISE?
Is J533 off?
OK
Check IC555, IC556 and IC557.
OK
Check drawer PCB.
YES
Does LED of drawer section light correctly with drawer switch pressed?
NO
YES
Is the indication of FL changed with SPE-ANA/SEA LEVEL pressed?
NO
Check IC707.
YES
◎ ✱1

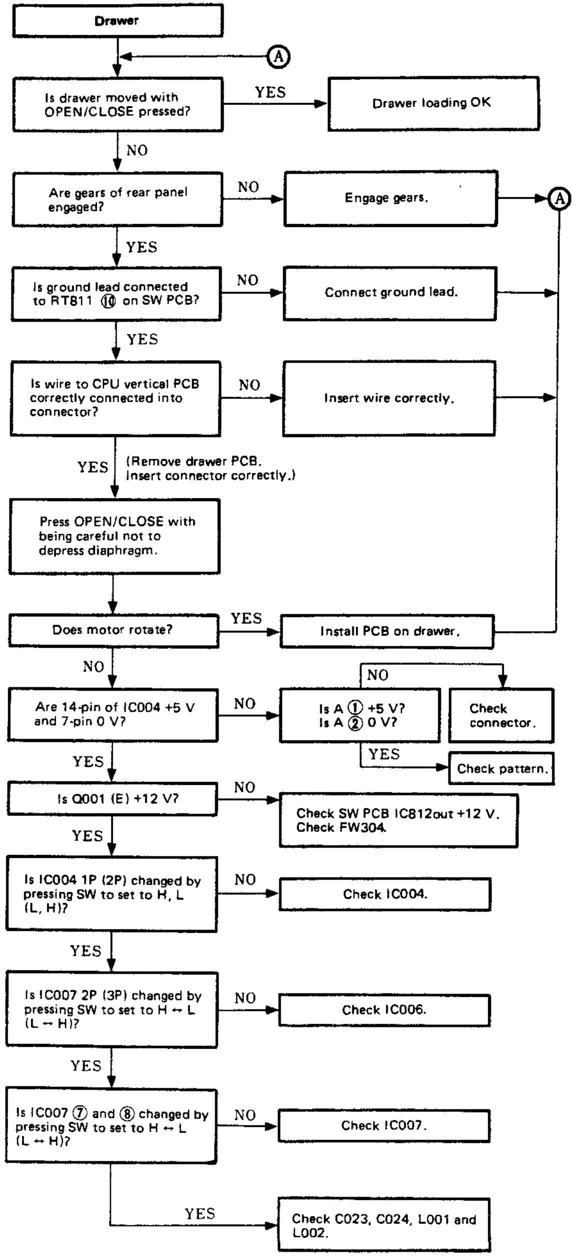

◎ ✱1
Is frequency response reversed with REVERSE pressed?
NO
Check IC707.
YES
Does SEA curve move UP and DOWN with SEA UP and DOWN pressed?
NO
Is data sent to IC707 ⑨.
YES
NO
Can data be input to J533?
YES
Check pattern to IC709 ⑨.
NO
Check drawer PCB.
YES
Are center LED and FL switched with CONT-RANGE ±6/±12 dB?
NO
Does Q702 (C) turn to +5 V (6 dB) and -35 V (12 dB)?
YES
Check FL.
NO
Check Q701, Q702 and Q703. Check IC558.
YES
Is curve changed with memory pattern selected?
NO
YES (SEA curve OK)
Can pink noise be indicated in FL?
Is the pink noise output level indicated by keeping DISPLAY LEVEL pressed?
NO
YES
YES
Is indication changed correctly with DISPLAY UP/DOWN pressed?
NO
IC550 faulty
YES
Is speed changed with SLOW/FAST pressed?
NO
Is P701 ⑧ +5 V with SLOW pressed and 0 V with FAST pressed?
YES
Check Q706, 707, IC724 and IC715.
NO
Pattern to IC555 ⑥ defective
YES
Does PEAK HOLD operate?
NO
YES
Does STILL-MEMORY operate?
NO
YES
Ass'y
Is input level attenuated by -6 dB by pressing ATT?
NO
Is shaft connected correctly?
OK
Check SW PCB pattern.
YES
Does HFR operate?
NO
YES
Does FL turn to microphone mode by pressing MIC SW?
R-ch → arrow
L-ch → spectrum analyzer
NO
YES
◎ ✱2


✱ 2
Is sound picked up by MIC indicated in L-ch when MIC is inserted?
NO
Is P546 off?
Ass'y
OK
Is signal output to MIC PCB ㉘ ?
NO
Check microphone PCB.
NO
Check IC548 and IC551.
YES
Is relay operated by pressing PRESET?
Check Q301 and Q302.
OK
Membrane PCB, IC555, IC557
(Spectrum analyzer OK)
YES
Can LINE OUT be observed with an oscilloscope after inputting LINE IN signal (1 kHz, 0.1 V).
NO
Is the condition for checking operation set?
Setting
OK
Check SW PCB pattern.
YES
Are IC401 ① and ⑦ outputs correct?
YES
Spectrum analyzer is changed with memory pattern.
NO
YES
END
NO
Are waveforms of IC402 ③ and ⑤ output?
NO
YES
IC400 defective
Are waveforms of IC401 ⑧ and ⑤ output?
YES
NO
SEA PCB pattern defective
Are waveforms of IC403 and 404 ㉕ changed?
YES
NO
Are waveforms of IC403 and 404 ㉖ input?
NO
YES
IC403 or IC404 defective

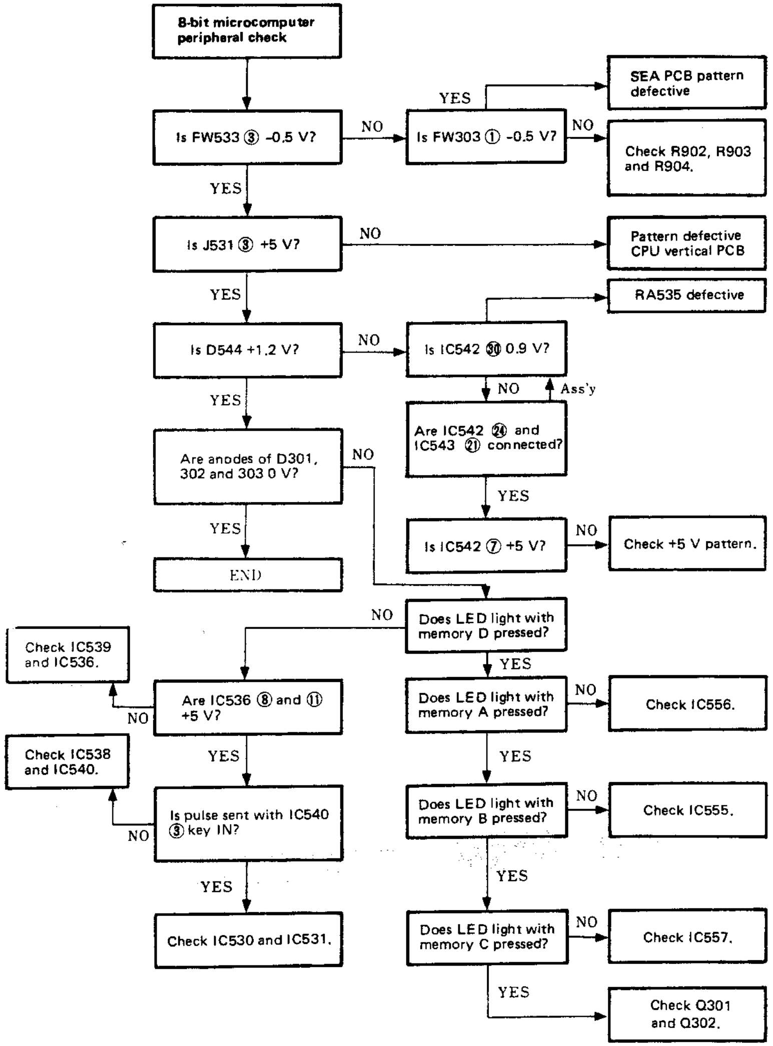
Reference

CPU vertical PCB	ENF-005-2
CPU oblique PCB	ENF-005-1
FL PCB	ENB-004
SW PCB	ENC-003
Power supply PCB	END-009
SEA PCB	ENE-008

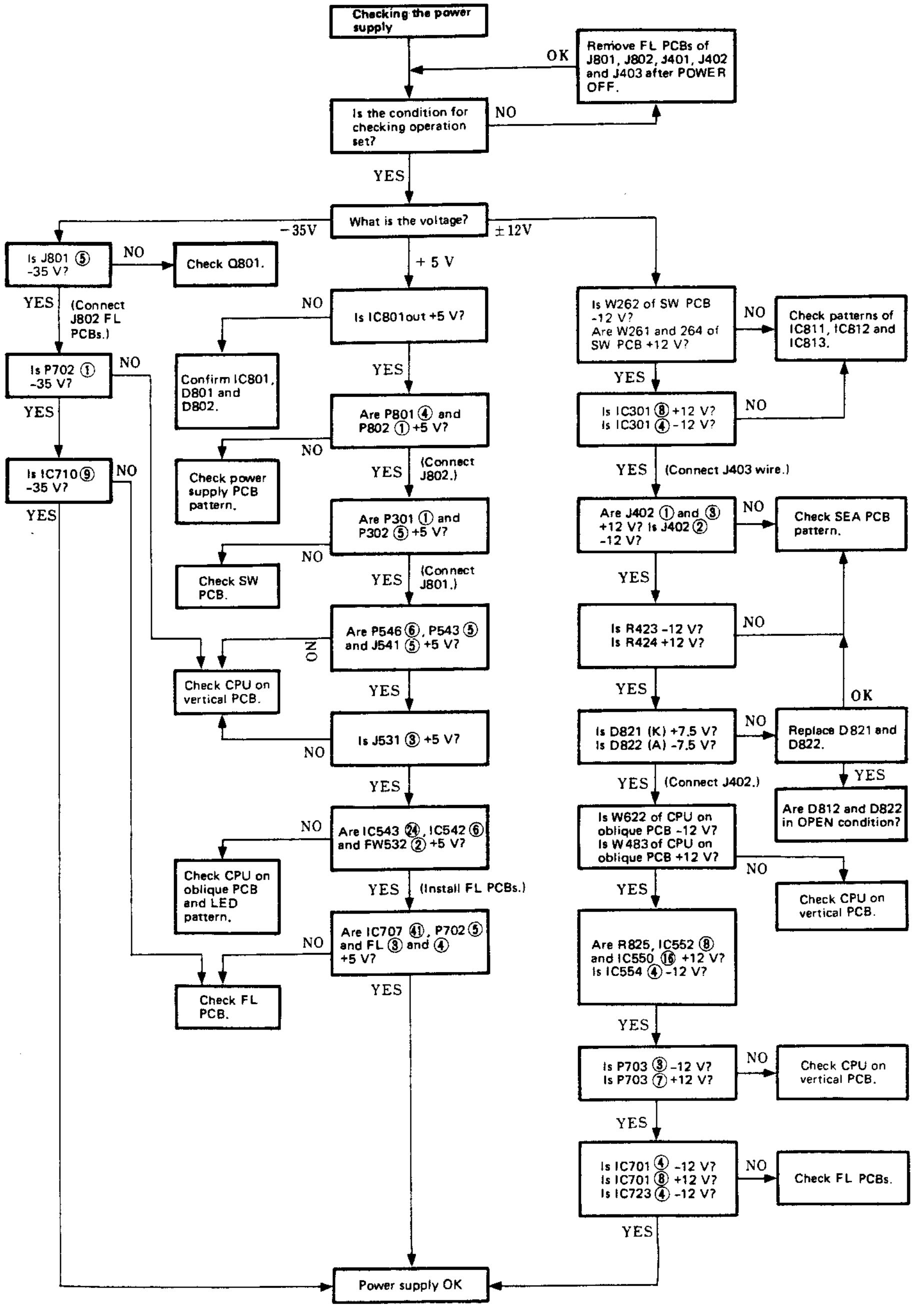
7-(2) Drawer


Drawer
Ⓐ
Is drawer moved with OPEN/CLOSE pressed?
YES
Drawer loading OK
NO
Are gears of rear panel engaged?
NO
Engage gears.
Ⓐ
YES
Is ground lead connected to RT811 ⑩ on SW PCB?
NO
Connect ground lead.
YES
Is wire to CPU vertical PCB correctly connected into connector?
NO
Insert wire correctly.
YES
(Remove drawer PCB. Insert connector correctly.)
Press OPEN/CLOSE with being careful not to depress diaphragm.
Does motor rotate?
YES
Install PCB on drawer.
NO
Are 14-pin of IC004 +5 V and 7-pin 0 V?
NO
Is A ① +5 V? Is A ② 0 V?
NO
Check connector.
YES
Check pattern.
YES
Is Q001 (E) +12 V?
NO
Check SW PCB IC812out +12 V. Check FW304.
YES
Is IC004 1P (2P) changed by pressing SW to set to H, L (L, H)?
NO
Check IC004.
YES
Is IC007 2P (3P) changed by pressing SW to set to H ↔ L (L ↔ H)?
NO
Check IC006.
YES
Is IC007 ⑦ and ⑧ changed by pressing SW to set to H ↔ L (L ↔ H)?
NO
Check IC007.
YES
Check C023, C024, L001 and L002.

3) 8-bit Microcomputer Peripheral Check


8-bit microcomputer peripheral check
Is FW533 ③ -0.5 V?
NO
Is FW303 ① -0.5 V?
YES
SEA PCB pattern defective
NO
Check R902, R903 and R904.
YES
Is J531 ③ +5 V?
NO
Pattern defective CPU vertical PCB
YES
Is D544 +1.2 V?
NO
Is IC542 ㉚ 0.9 V?
RA535 defective
NO
Ass'y
Are IC542 ㉔ and IC543 ㉑ connected?
YES
Is IC542 ⑦ +5 V?
NO
Check +5 V pattern.
YES
Are anodes of D301, 302 and 303 0 V?
NO
YES
END
Does LED light with memory D pressed?
NO
Are IC536 ⑧ and ⑪ +5 V?
NO
Check IC539 and IC536.
YES
Is pulse sent with IC540 ③ key IN?
NO
Check IC538 and IC540.
YES
Check IC530 and IC531.
YES
Does LED light with memory A pressed?
NO
Check IC556.
YES
Does LED light with memory B pressed?
NO
Check IC555.
YES
Does LED light with memory C pressed?
NO
Check IC557.
YES
Check Q301 and Q302.

7-(4) Checking the Power Supply


Checking the power supply
OK
Remove FL PCBs of J801, J802, J401, J402 and J403 after POWER OFF.
Is the condition for checking operation set?
NO
YES
What is the voltage?
-35V
+5 V
±12V
Is J801 ⑤ -35 V?
NO
Check Q801.
YES
(Connect J802 FL PCBs.)
Is P702 ① -35 V?
NO
YES
Is IC710 ⑨ -35 V?
NO
YES
Is IC801out +5 V?
NO
Confirm IC801, D801 and D802.
YES
Are P801 ④ and P802 ① +5 V?
NO
Check power supply PCB pattern.
YES
(Connect J802.)
Are P301 ① and P302 ⑤ +5 V?
NO
Check SW PCB.
YES
(Connect J801.)
Are P546 ⑥, P543 ⑤ and J541 ⑤ +5 V?
NO
Check CPU on vertical PCB.
YES
Is J531 ③ +5 V?
NO
YES
Are IC543 ㉔, IC542 ⑥ and FW532 ② +5 V?
NO
Check CPU on oblique PCB and LED pattern.
YES
(Install FL PCBs.)
Are IC707 ㊶, P702 ⑤ and FL ③ and ④ +5 V?
NO
Check FL PCB.
YES
Is W262 of SW PCB -12 V? Are W261 and 264 of SW PCB +12 V?
NO
Check patterns of IC811, IC812 and IC813.
YES
Is IC301 ⑧ +12 V? Is IC301 ④ -12 V?
NO
YES
(Connect J403 wire.)
Are J402 ① and ③ +12 V? Is J402 ② -12 V?
NO
Check SEA PCB pattern.
YES
Is R423 -12 V? Is R424 +12 V?
NO
OK
YES
Is D821 (K) +7.5 V? Is D822 (A) -7.5 V?
NO
Replace D821 and D822.
YES
Are D812 and D822 in OPEN condition?
YES
(Connect J402.)
Is W622 of CPU on oblique PCB -12 V? Is W483 of CPU on oblique PCB +12 V?
NO
Check CPU on vertical PCB.
YES
Are R825, IC552 ⑧ and IC550 ⑯ +12 V? Is IC554 ④ -12 V?
YES
Is P703 ③ -12 V? Is P703 ⑦ +12 V?
NO
Check CPU on vertical PCB.
YES
Is IC701 ④ -12 V? Is IC701 ⑧ +12 V? Is IC723 ④ -12 V?
NO
Check FL PCBs.
YES
Power supply OK

PARTS LIST

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   3-(2) ENB-004☐ F L P.C. Board Ass'y 2-11
   3-(3) ENF-005 Main CPU P.C. Board Ass'y 2-14
   3-(4) ENE-008☐ SEA Amp. P.C. Board Ass'y 2-18
   3-(5) END-009☐ Power Supply P.C. Board Ass'y 2-22
4. Accessory Microphone 2-24
5. Packing Materials and Part Numbers 2-25
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I. Exploded View and Parts List

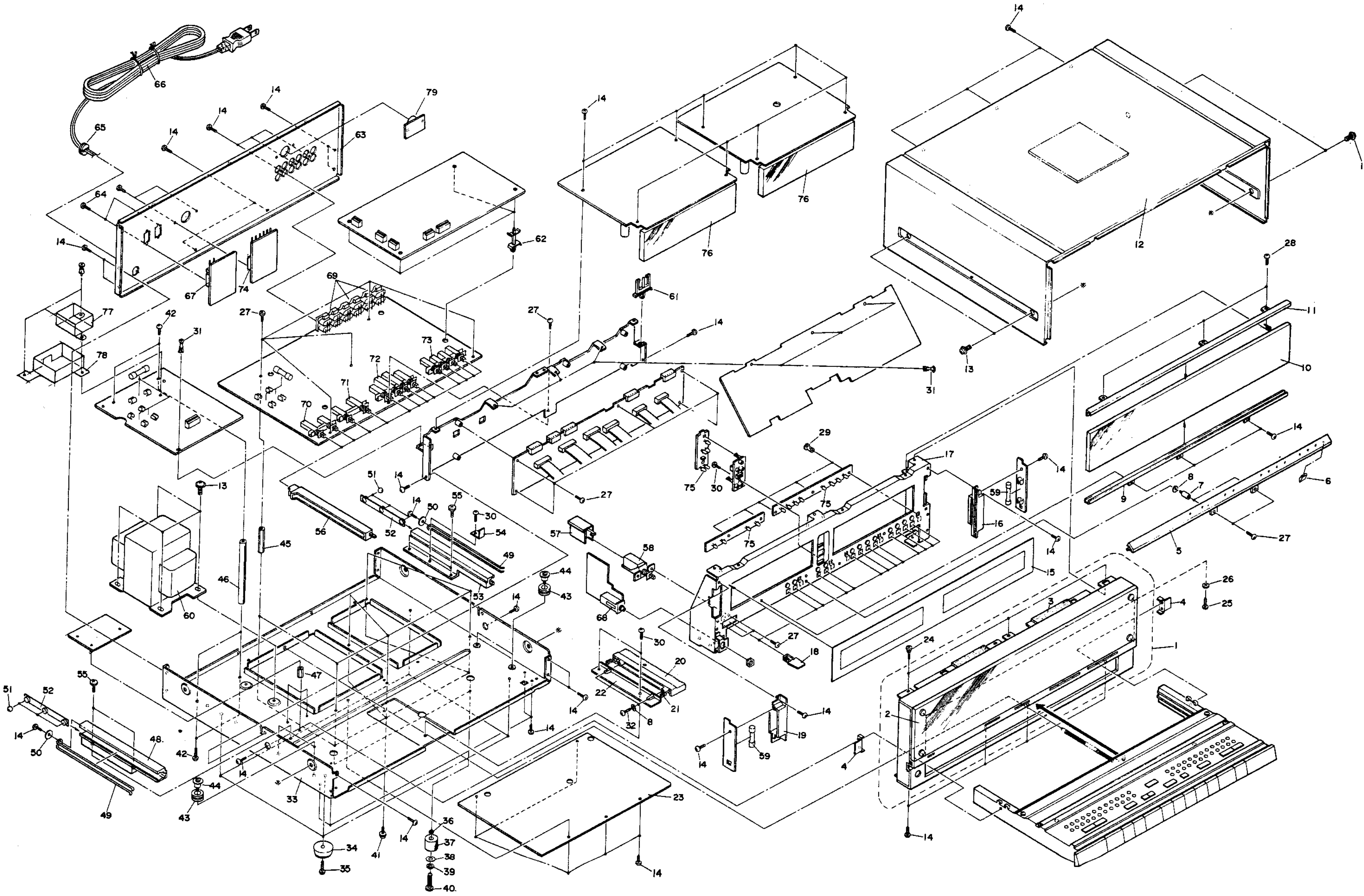
△	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-SEAM9E	Front Panel Ass'y	1		
	2	E24518-002	Window Screen	1		
	3	EXO070010N50S	Felt Spacer	2		
	4	E70797-001	Stopper Bracket	2		
	5	E302913-002	Indicator Plate	1		
	6	E70786-001	Indicator	12		
	7	E44182-046	Stud	2		
	8	WNS3000N	Washer	4		
	9	E302912-001	Scale Guide	1		
	10	E302909-001	Scale	1		
	11	E302911-001	Scale Guide	1		
	12	E24507-002	Metal Cover	1		
	13	E61660-004	Screw	8		
	14	SBSB3008M	Screw	48		
	15	E302907-001	FL Screen	1		
	16	E302915-001	Lamp House	1		
	17	E24513-001	Front Bracket	1		
	18	E70789-002	Push Knob	13		
	19	E302915-003	Lamp House	1		
	20	VKS4361-003	Rack	1		
	21	VKW3001-085	Spring	1		
	22	E70817-002	Rack Bracket	1		
	23	E302098-003	Bottom Cover	1		
	24	E66052-001	Screw	4		
	25	E70787-001	Screw	4		
	26	Q03093-817	Washer	4		
	27	SPSP3006M	Screw	18		
	28	SDSB3006M	Screw	3		
	29	E48729-009	Plastic Rivet	5		
	30	E65119-004	Screw	4		
	31	E48729-008	Plastic Rivet	9		
	32	SBST2606Z	Screw	2		
	33	E10906-002	Chassis Base	1		
	34	E47227-013	Foot	4		
	35	GBSB3010M	Screw	4		
	36	RDS3000M	CS Ring	2		
	37	Y40209-013	Tube Spacer	2		
	38	E70405-001	Caution Tag	2		
	39	WNS4000N	Washer	2		
	40	LPSP4020Z	Screw	2		
	41	LPSP3006M	Screw	9		
	42	SBSB3012M	Screw	6		
	43	E68465-001	Rubber Bushing	4		
	44	E66042-001	Screw	4		
	45	E44182-047	Stud	1		
	46	E71094-001	Stud	1		
	47	E44182-049	Stud	3		
	48	E302923-001	Sub Guide Rail	1		
	49	E70818-001	Guide Shaft	2		
	50	Q03091-104	Washer	2		
	51	E70819-001	Steel Ball	6		
	52	E302925-001	Retainer	2		
	53	E302924-001	Sub Guide Rail	1		
	54	E70821-001	Stopper	1		
	55	E60134-002	Screw	4		
	56	E67192-002	Push Shaft	1		
	57	E71004-002	Switch Cover	1		
△	58	QSP1106-004	Power Switch	1		Except BS
		QSP1106-004BS	Power Switch	1		BS only
	59	E03731-002	Fuse Lamp	2	Blue	
	60	ETP1030-08JA	Power Transformer	1		J, C
		ETP1030-08FA	Power Transformer	1		U, P, PG, E, G, A
		ETP1030-08FABS	Power Transformer	1		BS
	61	QHW3059-001	Wire Clamp	1		
	62	E24624-001	Fastener	1		
	63	E24514-001	Rear Panel	1		J, C
		E24514-002	Rear Panel	1		Except J, C
	64	SDSB3008M	Screw	2		
	65	QHS3876-162	Cord Stopper	1		Except BS
		QHS3876-162BS	Cord Stopper	1		BS only
△	66	QMP1200-200	Power Cord	1		J
		QMP1900-200	Power Cord	1		C
		QMP7600-250	Power Cord	1		U, P, PG
		QMP3900-200	Power Cord	1		E, G
		QMP2560-244	Power Cord	1		A
		QMP9017-008BS	Power Cord	1		BS
△	67	QMC0437-002	AC Outlet	1		J, C, U, P, PG
	68	QMS6302-126	Mic Jack	1		
	69	EMN00TV-403A	4P Pin Jack	3		
	70	QST5281-E01	Push Switch	1	H.F.R. ATTENATOR	
	71	QST5281-E01	Push Switch	1	SEA	
	72	QST5441-E01	Push Switch	1	RECORDING	
	73	QST5441-E02	Push Switch	1	LINE OUT	
△	74	QSR0085-001U	Voltage Selector	1		U, P, PG, E, G, A
		QSR0085-001UBS	Voltage Selector	1		BS
	75	SLR-34VC50F	L.E.D	17		
	76	ELU0001-019	FL Tube	2		
	77	E303205-001	Protector	1		E, G, A, BS
	78	E71462-001	Protector	1		E, A, G, BS
	79	E03623-003	Din Socket	1		Except J,C.

The Marks for Designated Areas.

J . . . . U.S.A.
C . . . . Canada
E . . . . Europe
G . . . . West Germany
A . . . . Australia
P, PG . . U.S. Military Market
BS . . . U.K.
U . . . . Other Countries

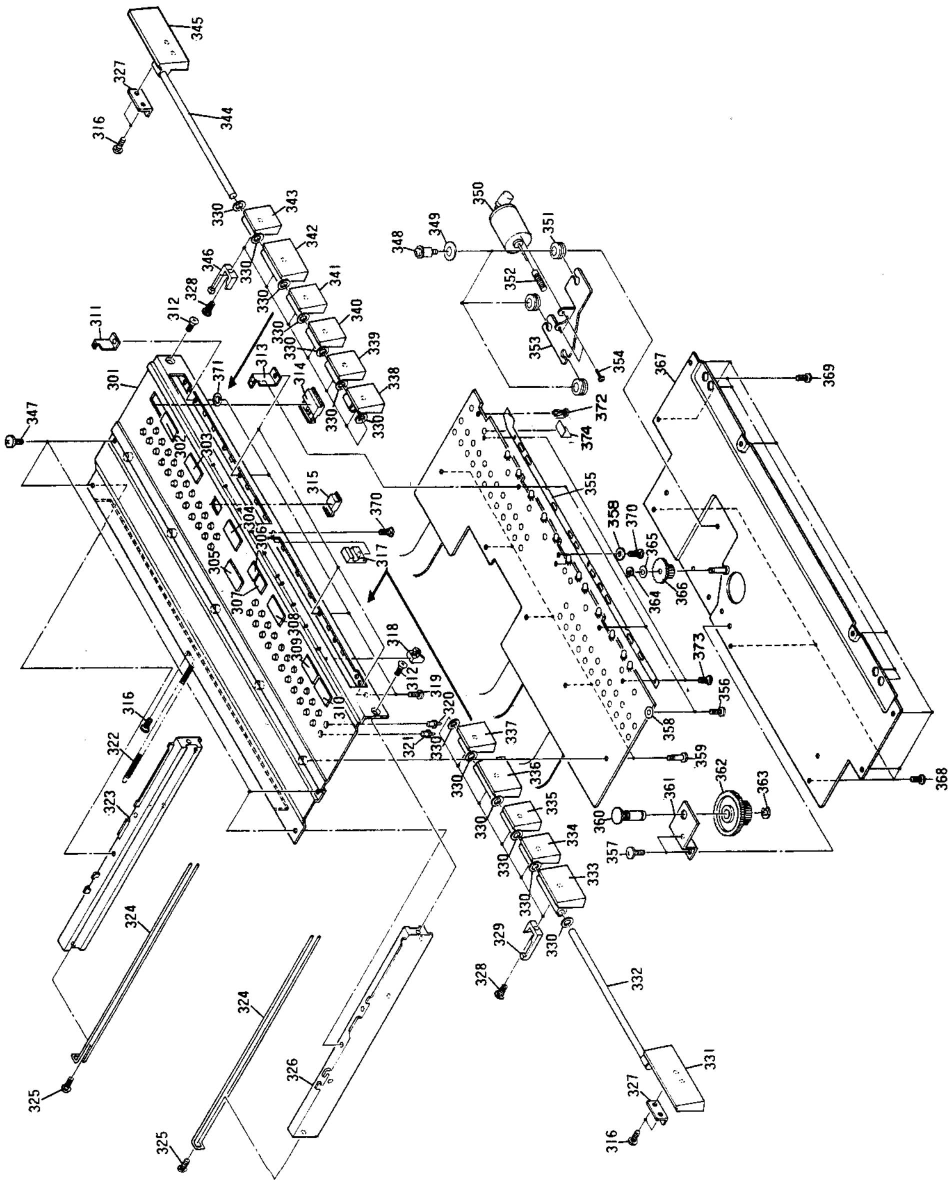
△: Safety Parts

– MEMO –



— MEMO —

2. Exploded View of Loading Mechanism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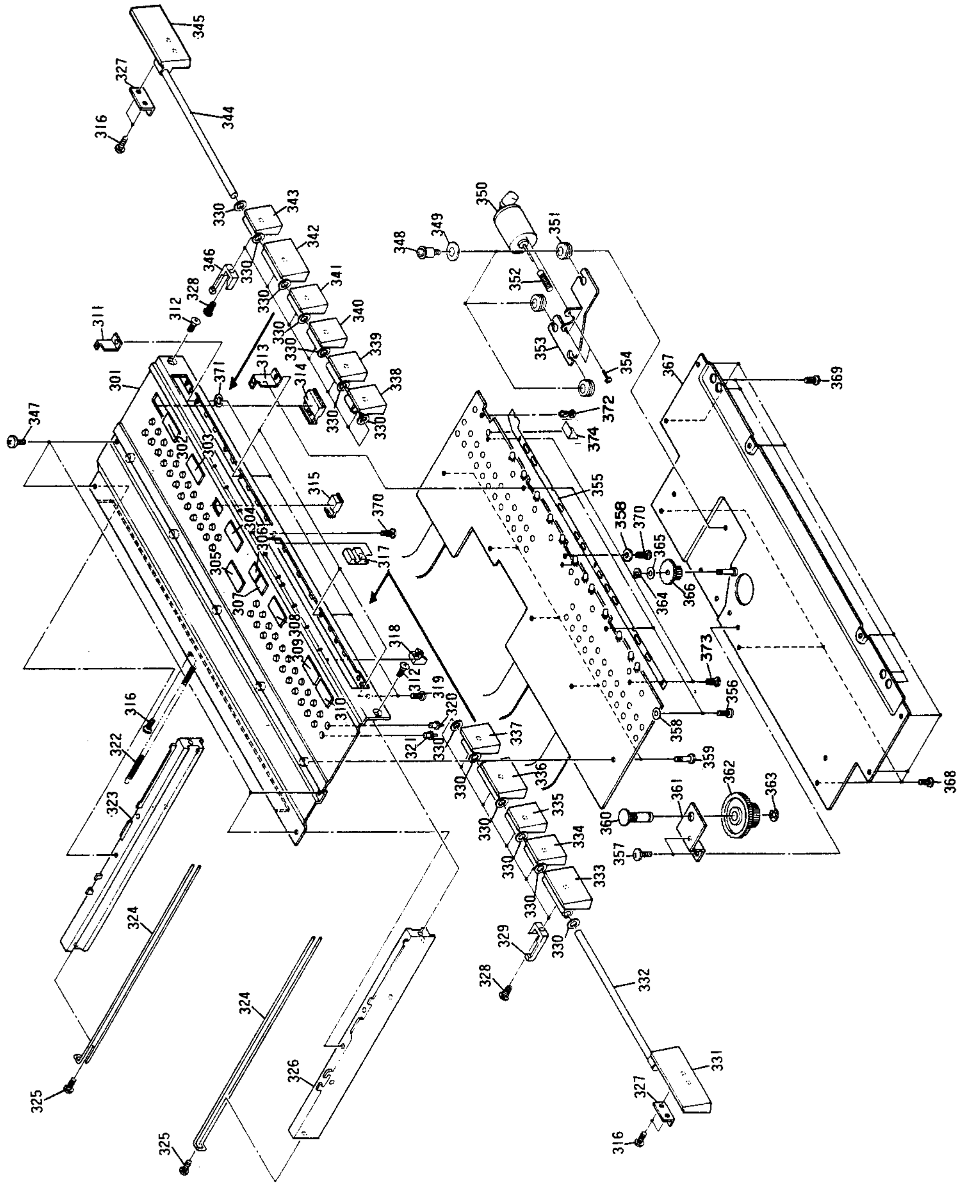
2. Exploded View of Loading Mechanism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△	Item	Part Number	Part Name	Q'ty	Description
	301	E24521-001	Drawer Panel	1	
	302	E302918-007	Push Knob	1	CONTROL RANGE
	303	E303308-003	Push Knob	1	MEMORY
	304	E303308-002	Push Knob	1	START
	305	E302918-001	Push Knob	1	SYNCRO CONTROL
	306	E303308-006	Push Knob	1	R
	307	E303308-005	Push Knob	1	L
	308	E303308-001	Push Knob	1	MIC
	309	E302918-003	Push Knob	1	UP
	310	E302918-002	Push Knob	1	DOWN
	311	E70816-003	Bracket	1	
	312	SSST3006M	Screw	2	
	313	E70816-001	Bracket	3	
	314	E303308-004	Push Knob	1	REVERSE
	315	E302918-011	Push Knob	1	RESET
	316	SBSB3008M	Screw	5	
	317	E70814-002	Support	1	
	318	E70803-001	Indicator	12	
	319	LPSP3006M	Screw	4	
	320	E71361-002	Push Knob	24	Red
	321	E71361-001	Push Knob	24	Blue
	322	E71453-001	Spring	1	
	323	E302917-001	Guide Rail	1	
	324	E70796-001	Guide Shaft	2	
	325	SBSB3010M	Screw	2	
	326	E302917-002	Guide Rail	1	
	327	E70815-001	Bracket	2	
	328	SBSB2610M	Screw	11	
	329	E70811-003	Pusher	5	
	330	Q03093-833	Washer	13	
	331	E70806-001	Push Knob	1	
	332	E70813-001	Shaft	1	
	333	E70807-001	Push Knob	1	SLOW FAST
	334	E70807-002	Push Knob	1	PEAK HOLD
	335	E70807-003	Push Knob	1	STILL MEMORY
	336	E70807-004	Push Knob	1	SPE-ANA, SEA LEVEL
	337	E70808-002	Push Knob	1	A
	338	E70808-001	Push Knob	1	B
	339	E70807-005	Push Knob	1	C
	340	E70807-006	Push Knob	1	D
	341	E70807-007	Push Knob	1	E
	342	E70807-008	Push Knob	1	FLAT
	343	E70807-009	Push Knob	1	OPEN/CLOSE
	344	E70813-002	Shaft	1	
	345	E70810-001	Push Knob	1	
	346	E70811-004	Pusher	6	
	347	SBSB4010M	Screw	4	
	348	E66042-004	Screw	3	
	349	Q03091-152	Washer	3	
	350	E300763-005	Motor	1	
	351	E66509-001	Rubber Bushing	2	
	352	E67044-004	Warm Gear	1	
	353	E68960-001	Motor Bracket	1	
	354	SPSP2003Z	Screw	2	
	355	E303380-001	Leaf Spring	1	
	356	SBSB2606Z	Screw	3	
	357	E60134-001	Screw	2	
	358	E71350-001	Washer	2	
	359	E49447-004	Shaft	5	
	360	E70795-001	Shaft	1	
	361	E70794-001	Gear Bracket	1	
	362	E70793-002	Gear	1	
	363	REE3000	E Ring	1	
	364	REE2000	E Ring	1	
	365	Q03093-817	Washer	1	
	366	E68463-002	F. Gear	1	
	367	E24520-001	Drawer Chassis	1	
	368	SDSB3006M	Screw	9	
	369	SPSP3006N	Screw	4	
	370	SDSB3008M	Screw	2	
	371	WNS3000N	Washer	2	
	372	E48729-007	Plastic Rivet	1	
	373	LPSP2304	Screw	3	
	374	E71874-001	Spacer	1	

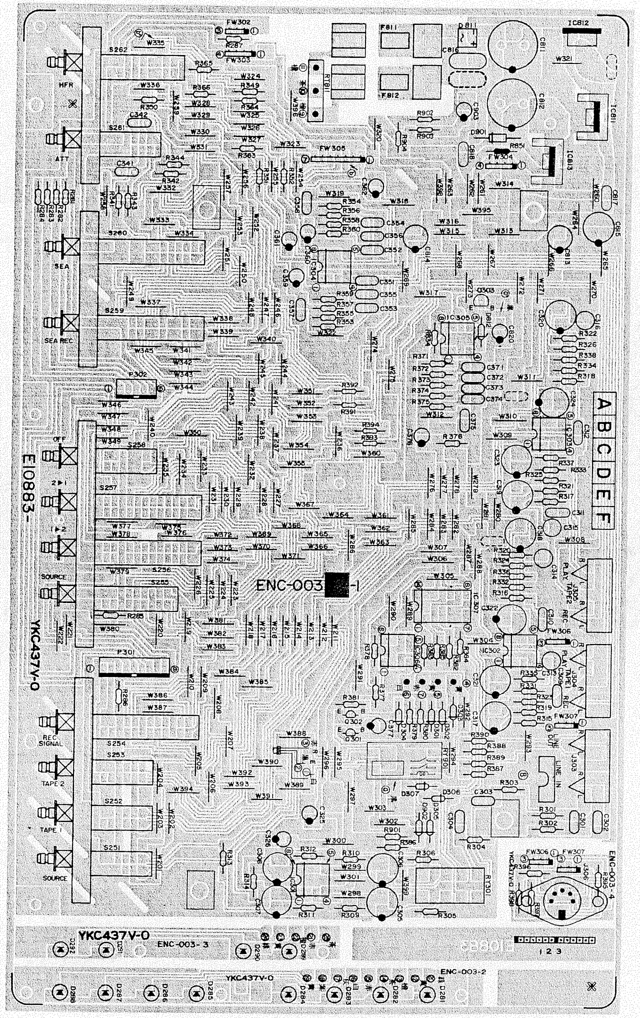
3. Printed Circuit Board Ass'y and Parts List

-(1) ENC-003☐ Switch P.C. Board Ass'y

lote: ENC-003☐ varies according to the areas employed. See note (1) when placing on order.

lote (1)

P.C. Board Ass'y	Designated Areas
ENC-003 A	U.S.A. & Canada
ENC-003 B	Europe, Australia, West Germany, U.K., U.S. Military Market & Other Countries



Transistors

⚠	Item	Part Number	Description	Maker	Areas
	Q301	2SC1815(GR,BL)	Silicon	Toshiba	
	Q302	2SC1815(GR,BL)	Silicon	Toshiba	
	Q303	DTC144N	Silicon		

ICs

⚠	Item	Part Number	Description	Maker	Areas
	IC301	LM833N			
	IC302	LM833N			
	IC303	LM833N			
	IC304	NJM4560D-X		Dainichi	
	IC305	MM5437N			
	IC306	NJM4560D-X		Dainichi	
	IC307	TC4066BP		Toshiba	
	IC811	L78M12		Sanyo	
	IC812	L78M12		Sanyo	
	IC813	UPC7912H		NEC	

Diodes

⚠	Item	Part Number	Description	Maker	Areas
	D281	SLR-34VC50F	L.E.D.	Rohm	
	D282	SLR-34VC50F	L.E.D.	Rohm	
	D283	SLR-34VC50F	L.E.D.	Rohm	
	D284	SLR-34VC50F	L.E.D.	Rohm	
	D285	SLR-34VC50F	L.E.D.	Rohm	
	D286	SLR-34VC50F	L.E.D.	Rohm	
	D287	SLR-34VC50F	L.E.D.	Rohm	
	D288	SLR-34VC50F	L.E.D.	Rohm	
	D289	SLR-34VC50F	L.E.D.	Rohm	
	D290	SLR-34VC50F	L.E.D.	Rohm	
	D291	SLR-34VC50F	L.E.D.	Rohm	
	D292	SLR-34VC50F	L.E.D.	Rohm	
	D301	1S2076-31	Silicon	Hitachi	
	D302	1S2076-31	Silicon	Hitachi	
	D303	1S2076-31	Silicon	Hitachi	
	D304	1S2076-31	Silicon	Hitachi	
	D305	1S2076-31	Silicon	Hitachi	
	D306	1S2076-31	Silicon	Hitachi	
	D307	1S2076-31	Silicon	Hitachi	
	D811	1D4B42	Silicon		
	D812	RD5.6EB3	Zener	NEC	
	D901	ERB12-02RKL1	Silicon		
	D902	1S2076-31	Silicon	Hitachi	

Capacitors

⚠	Item	Part Number	Description			Areas
	C301	QFP31HJ-101	100PF	50V	Poly	
	C302	QFP31HJ-101	100PF	50V	Poly	
	C303	QFP31HJ-101	100PF	50V	Poly	
	C304	QFP31HJ-101	100PF	50V	Poly	
	C305	EEZ5001-475	4.7MF		Electro	
	C306	EEZ5001-475	4.7MF		Electro	
	C307	QET61CM-226	22MF	16V	Electro	
	C308	QET61CM-226	22MF	16V	Electro	
	C309	QFP31HJ-101	100PF	50V	Poly	
	C310	QFP31HJ-101	100PF	50V	Poly	
	C311	QFP31HJ-101	100PF	50V	Poly	
	C312	QFP31HJ-101	100PF	50V	Poly	
	C313	QFS81HJ-470	47PF	50V	Poly	
	C314	QFS81HJ-470	47PF	50V	Poly	
	C315	QFS81HJ-470	47PF	50V	Poly	

Capacitors

⚠	Item	Part Number	Description			Areas
	C316	QFS81HJ-470	47PF	50V	Poly	
	C317	EEZ5001-475	4.7MF		Electro	
	C318	EEZ5001-475	4.7MF		Electro	
	C319	EEZ5001-475	4.7MF		Electro	
	C320	EEZ5001-475	4.7MF		Electro	
	C321	QET61CM-226	22MF	16V	Electro	
	C322	QET61CM-226	22MF	16V	Electro	
	C323	QET61CM-226	22MF	16V	Electro	
	C324	QET61CM-226	22MF	16V	Electro	
	C325	QET61CM-226	22MF	16V	Electro	
	C326	QET61CM-226	22MF	16V	Electro	
	C341	QFN81HK-102	1000PF	50V	Mylar	
	C342	QFN81HK-102	1000PF	50V	Mylar	
	C351	QFP31HJ-821	820PF	50V	Poly	
	C352	QFP31HJ-821	820PF	50V	Poly	
	C353	QFV71HJ-222	2200PF	50V	T. Film	
	C354	QFV71HJ-222	2200PF	50V	T. Film	
	C355	QFV71HJ-472	4700PF	50V	T. Film	
	C356	QFV71HJ-472	4700PF	50V	T. Film	
	C357	QFP31HJ-221	220PF	50V	Poly	
	C358	QFP31HJ-221	220PF	50V	Poly	
	C359	QET61CM-226	22MF	16V	Electro	
	C360	QET61CM-226	22MF	16V	Electro	
	C361	QET61CM-226	22MF	16V	Electro	
	C362	QET61CM-226	22MF	16V	Electro	
	C371	QFV81HJ-474	0.47MF	50V	T. Film	
	C372	QFV71HJ-184	0.18MF	50V	T. Film	
	C373	QFV71HJ-683	0.063MF	50V	T. Film	
	C374	QFN31HJ-223	0.022MF	50V	Mylar	
	C375	QFN31HJ-183	0.018MF	50V	Mylar	
	C376	QET61HM-225	2.2MF	50V	Electro	
	C377	QET61HM-105	1MF	50V	Electro	
	C811	QET51EM-228	2200MF	25V	Electro	
	C812	QET51EM-228	2200MF	25V	Electro	
	C813	QET61CM-107	100MF	16V	Electro	
	C814	QET61CM-107	100MF	16V	Electro	
	C815	QET51CM-477	470MF	16V	Electro	
	C816	EFZ0091-103	0.1MF		Mylar	
	C817	QFN31HK-223	0.022MF	50V	Mylar	
	C818	QFN31HK-223	0.022MF	50V	Mylar	
	C820	QET61AM-227	220MF	10V	Electro	
	C901	QET51HM-474	0.47MF	50V	Electro	
	C902	QET51CM-226	22MF	16V	Electro	
	C903	QET61HM-225	2.2MF	50V	Electro	

Resistors

⚠	Item	Part Number	Description			Areas
	R281	QRD141J-271S	270	¼W	Carbon	
	R282	QRD141J-271S	270	¼W	Carbon	
	R283	QRD141J-271S	270	¼W	Carbon	
	R284	QRD141J-271S	270	¼W	Carbon	
	R285	QRD141J-271S	270	¼W	Carbon	
	R286	QRD141J-271S	270	¼W	Carbon	
	R287	QRD141J-101S	100	¼W	Carbon	
	R301	QRD141J-104S	110K	¼W	Carbon	
	R302	QRD141J-104S	110K	¼W	Carbon	
	R303	QRD141J-221S	220	¼W	Carbon	
	R304	QRD141J-221S	220	¼W	Carbon	
	R305	QRD141J-224S	220K	¼W	Carbon	
	R306	QRD141J-224S	220K	¼W	Carbon	
	R309	QRD141J-224S	220K	¼W	Carbon	
	R310	QRD141J-224S	220K	¼W	Carbon	
	R311	QRD141J-153S	15K	¼W	Carbon	
	R312	QRD141J-153S	15K	¼W	Carbon	
	R313	QRD141J-220S	22	¼W	Carbon	
	R314	QRD141J-220S	22	¼W	Carbon	
	R315	QRD141J-104S	110K	¼W	Carbon	

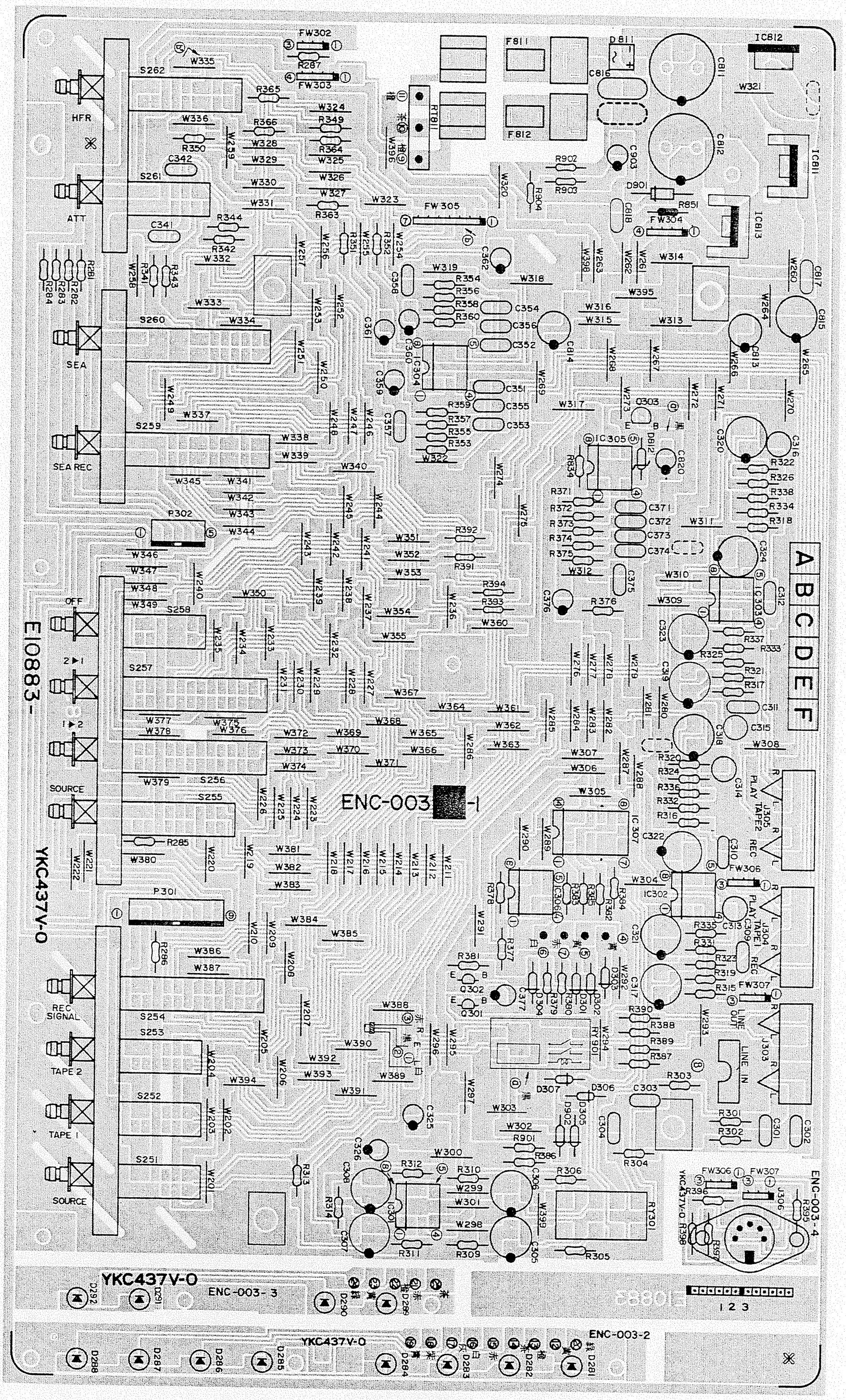
3. Printed Circuit Board Ass'y and Parts List

3-(1) ENC-003☐ Switch P.C. Board Ass'y

Note: ENC-003☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENC-003 A	U.S.A. & Canada
ENC-003 B	Europe, Australia, West Germany, U.K., U.S. Military Market & Other Countries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REC SIGNAL
TAPE 2
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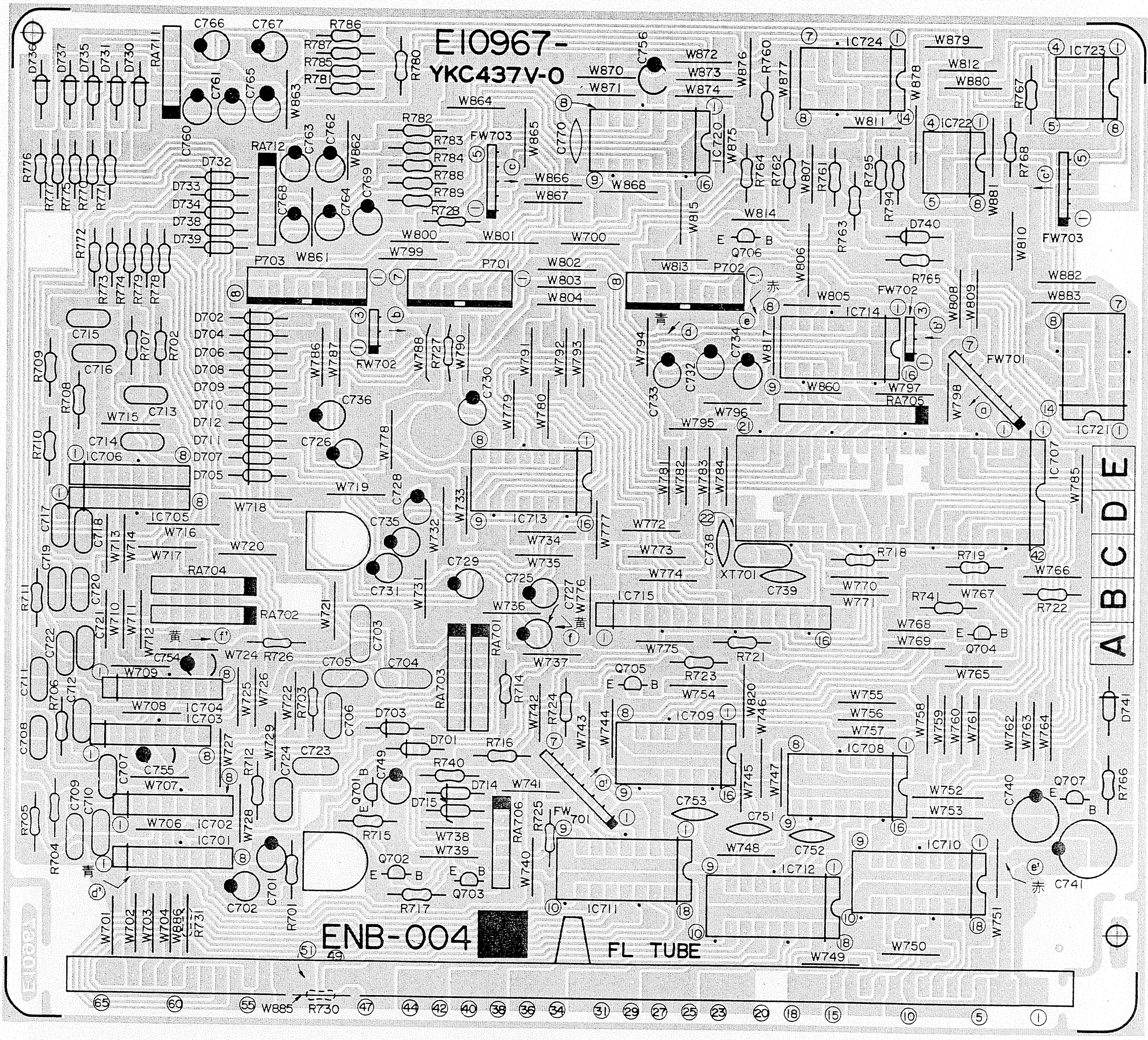
PLAY TAPE2
REC
PLAY TAPE1
LINE OUT
LINE IN
J303
J304
J305
J306
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC811
IC812
IC813
RY301
RY901
P301
P302
RT811
F811
F812
D811

3-(2) ENB-004☐ FL P.C. Board Ass'y

Note: ENB-004☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Description
ENB-004 A	L CH
ENB-004 B	R CH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ENB-004
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sistors

△	Item	Part Number	Description			Areas
	R316	QRD141J-104S	110K	¼W	Carbon	
	R317	QRD141J-104S	110K	¼W	Carbon	
	R318	QRD141J-104S	110K	¼W	Carbon	
	R319	QRD141J-221S	220	¼W	Carbon	
	R320	QRD141J-221S	220	¼W	Carbon	
	R321	QRD141J-221S	220	¼W	Carbon	
	R322	QRD141J-221S	220	¼W	Carbon	
	R323	QRD141J-104S	110K	¼W	Carbon	
	R324	QRD141J-104S	110K	¼W	Carbon	
	R325	QRD141J-104S	110K	¼W	Carbon	
	R326	QRD141J-104S	110K	¼W	Carbon	
	R331	QRD141J-153S	15K	¼W	Carbon	
	R332	QRD141J-153S	15K	¼W	Carbon	
	R333	QRD141J-153S	15K	¼W	Carbon	
	R334	QRD141J-153S	15K	¼W	Carbon	
	R335	QRD141J-220S	22	¼W	Carbon	
	R336	QRD141J-220S	22	¼W	Carbon	
	R337	QRD141J-220S	22	¼W	Carbon	
	R338	QRD141J-220S	22	¼W	Carbon	
	R341	QRD141J-472S	4.7K	¼W	Carbon	
	R342	QRD141J-472S	4.7K	¼W	Carbon	
	R343	QRD141J-472S	4.7K	¼W	Carbon	
	R344	QRD141J-472S	4.7K	¼W	Carbon	
	R349	QRD141J-104S	110K	¼W	Carbon	
	R350	QRD141J-104S	110K	¼W	Carbon	
	R351	QRD141J-222S	2.2K	¼W	Carbon	
	R352	QRD141J-222S	2.2K	¼W	Carbon	
	R353	QRD141J-471S	470	¼W	Carbon	
	R354	QRD141J-471S	470	¼W	Carbon	
	R355	QRD141J-821S	820	¼W	Carbon	
	R356	QRD141J-821S	820	¼W	Carbon	
	R357	QRD141J-222S	2.2K	¼W	Carbon	
	R358	QRD141J-222S	2.2K	¼W	Carbon	
	R359	QRD141J-104S	110K	¼W	Carbon	
	R360	QRD141J-104S	110K	¼W	Carbon	
	R363	QRD141J-153S	15K	¼W	Carbon	
	R364	QRD141J-153S	15K	¼W	Carbon	
	R365	QRD141J-220S	22	¼W	Carbon	
	R366	QRD141J-220S	22	¼W	Carbon	
	R370	QRD141J-221S	220	¼W	Carbon	
	R371	QRD141J-153S	15K	¼W	Carbon	
	R372	QRD141J-562S	5.6K	¼W	Carbon	
	R373	QRD141J-272S	2.7K	¼W	Carbon	
	R374	QRD141J-621S	620	¼W	Carbon	
	R375	QRD141J-331S	330	¼W	Carbon	
	R376	QRD141J-104S	110K	¼W	Carbon	
	R377	QRD141J-153S	15K	¼W	Carbon	
	R378	QRD141J-153S	15K	¼W	Carbon	
	R379	QRD141J-153S	15K	¼W	Carbon	
	R380	QRD141J-103S	10K	¼W	Carbon	
	R381	QRD141J-103S	10K	¼W	Carbon	
	R382	QRD141J-474S	470K	¼W	Carbon	
	R383	QRD141J-474S	470K	¼W	Carbon	
	R384	QRD141J-474S	470K	¼W	Carbon	
	R385	QRD141J-474S	470K	¼W	Carbon	
	R386	QRD148J-100S	10	¼W	Carbon	
	R387	QRD141J-223S	22K	¼W	Carbon	
	R388	QRD141J-223S	22K	¼W	Carbon	
	R389	QRD141J-820S	82	¼W	Carbon	
	R390	QRD141J-820S	82	¼W	Carbon	
	R391	QRD141J-820S	82	¼W	Carbon	
	R392	QRD141J-820S	82	¼W	Carbon	
	R393	QRD141J-820S	82	¼W	Carbon	
	R394	QRD141J-820S	82	¼W	Carbon	
	R395	QRD141J-334S	330K	¼W	Carbon	B
	R396	QRD141J-334S	330K	¼W	Carbon	B
	R397	QRD141J-104S	110K	¼W	Carbon	B
	R398	QRD141J-104S	110K	¼W	Carbon	B
△	R834	QRD145J-471S	470	¼W	Unf. Carbon	
△	R851	QRD145J-120S	12	¼W	Unf. Carbon	

Resistors

△	Item	Part Number	Description			Areas
	R901	QRD148J-100S	10	¼W	Carbon	
△	R902	QRD145J-220S	22	¼W	Unf. Carbon	
	R903	QRD141J-103S	10K	¼W	Carbon	
	R904	QRD141J-473S	47K	¼W	Carbon	

△: Safety Parts

Others

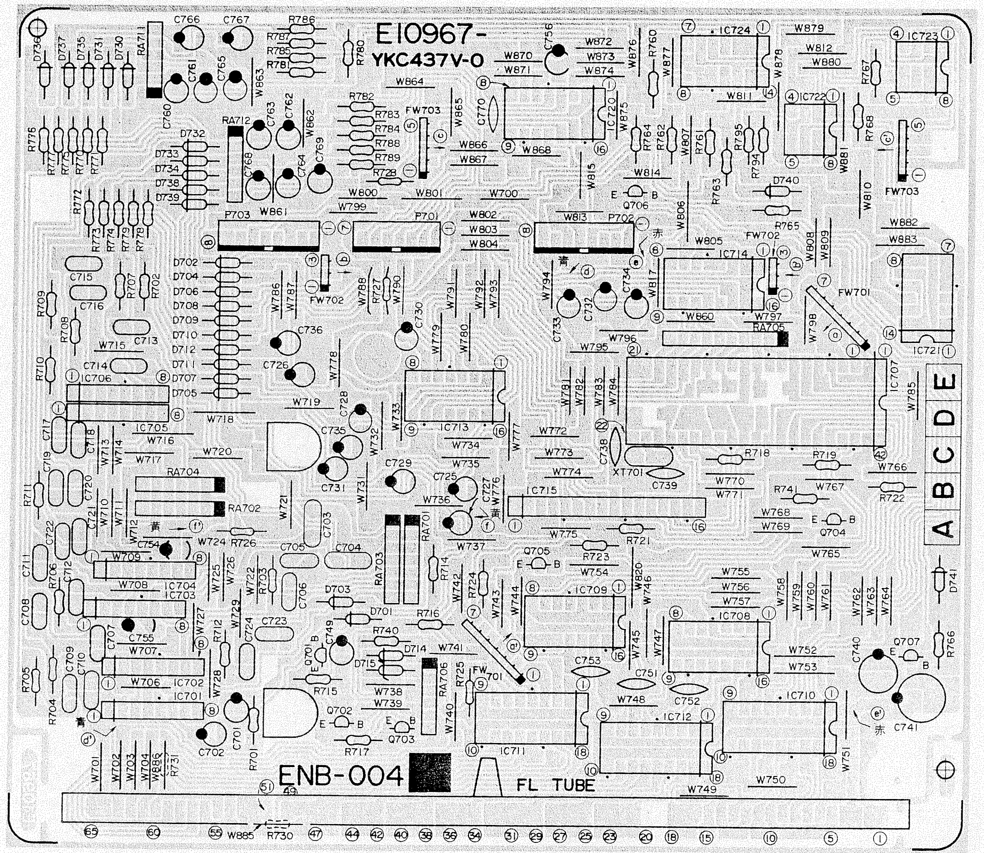
△	Item	Part Number	Description	Areas
	RY301	ESK5D12-212	Relay	
	RY901	ESK2D12-212	Relay	
		E10883-001	Circuit Board	
		E45524-002	Fuse Clip	A
		EMG7331-001	Fuse Clip	B
		SBSB3008M	Screw	
		E70859-001	Earth Plate	
	J303	EMN00TV-403A	Pin Jack Assy	
	J304	EMN00TV-403A	Pin Jack Assy	
	J305	EMN00TV-403A	Pin Jack Assy	
	J306	E03623-003	Din Socket	B
	P301	QMV5005-009	9P Plug Assy	
	P302	QMV5005-005	5P Plug Assy	
	RT811	E67764-103	Wrapping Terminal	
	S251	QST5441-E02	Push Switch	
	S252	QST5441-E02	Push Switch	
	S253	QST5441-E02	Push Switch	
	S254	QST5441-E02	Push Switch	
	S255	QST5441-E01	Push Switch	
	S256	QST5441-E01	Push Switch	
	S257	QST5441-E01	Push Switch	
	S258	QST5441-E01	Push Switch	
	S259	QST5281-E01	Push Switch	
	S260	QST5281-E01	Push Switch	
	S261	QST5281-E01	Push Switch	
	S262	QST5281-E01	Push Switch	

3-(2) ENB-004☐ FL P.C. Board Ass'y

Note: ENB-004☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Description
ENB-004 A	L CH
ENB-004 B	R CH



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⚠	Item	Part Number	Description		Areas
				Maker	
	Q701	2SA1015(O,Y)	Silicon	Toshiba	
	Q702	2SA1015(O,Y)	Silicon	Toshiba	
	Q703	2SA1015(O,Y)	Silicon	Toshiba	
	Q704	2SC1815(GR,BL)	Silicon	Toshiba	
	Q705	2SA1015(O,Y)	Silicon	Toshiba	
	Q706	2SA1015(O,Y)	Silicon	Toshiba	A
	Q707	2SA1015(O,Y)	Silicon	Toshiba	A

Cs

⚠	Item	Part Number	Description		Areas
				Maker	
	IC701	M5218L		Ryoyo	
	IC702	M5218L		Ryoyo	
	IC703	M5218L		Ryoyo	
	IC704	M5218L		Ryoyo	
	IC705	M5218L		Ryoyo	
	IC706	M5218L		Ryoyo	
	IC707	UPD1511AC-039		NEC	
	IC708	SN74LS138N			
	IC709	SN74LS138N			
	IC710	AN6873N		Matsushita	
	IC711	AN6873N		Matsushita	
	IC712	AN6873N		Matsushita	
	IC713	TC4051BP		Toshiba	
	IC714	TC4051BP		Toshiba	
	IC715	ENZ2002-002			
	IC720	TC4051BP		Toshiba	A
	IC721	TC4011BP		Toshiba	A
	IC722	NJM4560D-X		Dainichi	A
	IC723	NJM4560D-X		Dainichi	A
	IC724	TC4066BP		Toshiba	A

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⚠	Item	Part Number	Description		Areas
				Maker	
	D701	1S2076-31	Silicon	Hitachi	
	D702	1S2076-31	Silicon	Hitachi	
	D703	1S2076-31	Silicon	Hitachi	
	D704	1S2076-31	Silicon	Hitachi	
	D705	1S2076-31	Silicon	Hitachi	
	D706	1S2076-31	Silicon	Hitachi	
	D707	1S2076-31	Silicon	Hitachi	
	D708	1S2076-31	Silicon	Hitachi	
	D709	1S2076-31	Silicon	Hitachi	
	D710	1S2076-31	Silicon	Hitachi	
	D711	1S2076-31	Silicon	Hitachi	
	D712	1S2076-31	Silicon	Hitachi	
	D714	1S2076-31	Silicon	Hitachi	
	D715	RD5.6EB3	Silicon	NEC	
	D730	1S2076-31	Silicon	Hitachi	A
	D731	1S2076-31	Silicon	Hitachi	A
	D732	1S2076-31	Silicon	Hitachi	A
	D733	1S2076-31	Silicon	Hitachi	A
	D734	1S2076-31	Silicon	Hitachi	A
	D735	1S2076-31	Silicon	Hitachi	A
	D736	1S2076-31	Silicon	Hitachi	A
	D737	1S2076-31	Silicon	Hitachi	A
	D738	1S2076-31	Silicon	Hitachi	A
	D739	1S2076-31	Silicon	Hitachi	A
	D740	1S2076-31	Silicon	Hitachi	A
	D741	1S2076-31	Silicon	Hitachi	A

Capacitors

⚠	Item	Part Number	Description			Areas
	C701	QET61HM-105	1MF	50V	Electro	
	C702	QET61HM-105	1MF	50V	Electro	
	C703	QFV81HJ-474	0.47MF	50V	T. Film	
	C704	QFV81HJ-564	0.56MF	50V	T. Film	
	C705	QFV81HJ-224	0.22MF	50V	T. Film	
	C706	QFV81HJ-274	0.27MF	50V	T. Film	
	C707	QFV71HJ-124	0.12MF	50V	T. Film	
	C708	QFV71HJ-124	0.12MF	50V	T. Film	
	C709	QFN81HJ-623	0.062MF	50V	T. Film	
	C710	QFV71HJ-683	0.068MF	50V	T. Film	
	C711	QFV71HJ-333	0.033MF	50V	T. Film	
	C712	QFV71HJ-333	0.033MF	50V	T. Film	
	C713	QFV71HJ-333	0.033MF	50V	T. Film	
	C714	QFV71HJ-333	0.033MF	50V	T. Film	
	C715	QFN31HJ-153	0.015MF	50V	Mylar	
	C716	QFN31HJ-183	0.018MF	50V	Mylar	
	C717	QFP31HJ-822	8200PF	50V	Poly	
	C718	QFP81HJ-822	8200PF	50V	Poly	
	C719	QFP81HG-432	4300PF	50V	Poly	
	C720	QFP81HG-432	4300PF	50V	Poly	
	C721	QFP81HG-202	2000PF	50V	Poly	
	C722	QFP81HJ-222	2200PF	50V	Poly	
	C723	QFP31HJ-102	1000PF	50V	Poly	
	C724	QFP81HJ-102	1000PF	50V	Poly	
	C725	QET61HM-225	2.2MF	50V	Electro	
	C726	QET61HM-225	2.2MF	50V	Electro	
	C727	QET61HM-225	2.2MF	50V	Electro	
	C728	QET61HM-225	2.2MF	50V	Electro	
	C729	QET61HM-225	2.2MF	50V	Electro	
	C730	QET61HM-225	2.2MF	50V	Electro	
	C731	QET61HM-225	2.2MF	50V	Electro	
	C732	QET61HM-225	2.2MF	50V	Electro	
	C733	QET61HM-225	2.2MF	50V	Electro	
	C734	QET61HM-225	2.2MF	50V	Electro	
	C735	QET51HM-225	2.2MF	50V	Electro	
	C736	QET61HM-225	2.2MF	50V	Electro	
	C738	QCS31HJ-470	47PF	50V	Ceramic	
	C739	QCS31HJ-470	47PF	50V	Ceramic	
	C740	QET61AM-227	220PF	10V	Electro	
	C741	QET51HM-225	2.2MF	50V	Electro	
	C749	QET61CM-226	22MF	16V	Electro	
	C751	QCS31HJ-221	220PF	50V	Ceramic	
	C752	QCS31HJ-221	220PF	50V	Ceramic	
	C753	QCS31HJ-221	220PF	50V	Ceramic	
	C754	QETC1CM-476	47MF	16V	Electro	
	C755	QETC1CM-476	47MF	16V	Electro	
	C756	QETC1CM-476	47MF	16V	Electro	
	C760	QET61EM-106	10MF	25V	Electro	A
	C761	QET61EM-106	10MF	25V	Electro	A
	C762	QET61EM-106	10MF	25V	Electro	A
	C763	QET61EM-106	10MF	25V	Electro	A
	C764	QET61EM-106	10MF	25V	Electro	A
	C765	QET61CM-226	22MF	16V	Electro	
	C766	QET61CM-226	22MF	16V	Electro	
	C767	QET61CM-226	22MF	16V	Electro	
	C768	QET61CM-476	47MF	16V	Electro	A
	C769	QET61CM-476	47MF	16V	Electro	A
	C770	QCY21HK-102	1000PF	50V	Ceramic	A
	C830	QCE22HP-103	0.01UF	500V	Ceramic	

Resistors

⚠	Item	Part Number	Description			Areas
	R701	QRD141J-823S	82K	¼W	Carbon	
	R702	QRD141J-753S	75K	¼W	Carbon	
	R703	QRD141J-753S	75K	¼W	Carbon	
	R704	QRD141J-823S	82K	¼W	Carbon	
	R705	QRD141J-753S	75K	¼W	Carbon	
	R706	QRD141J-823S	82K	¼W	Carbon	
	R707	QRD141J-393S	39K	¼W	Carbon	
	R708	QRD141J-393S	39K	¼W	Carbon	
	R709	QRD141J-393S	39K	¼W	Carbon	
	R710	QRD141J-393S	39K	¼W	Carbon	
	R711	QRD141J-393S	39K	¼W	Carbon	
	R712	QRD141J-433S	43K	¼W	Carbon	
	R714	QRD141J-103S	10K	¼W	Carbon	
	R715	QRD141J-153S	15K	¼W	Carbon	
	R716	QRD141J-103S	10K	¼W	Carbon	
	R717	QRD141J-221S	220	¼W	Carbon	
	R718	QRD141J-101S	100	¼W	Carbon	
	R719	QRD141J-103S	10K	¼W	Carbon	
	R721	QRD141J-103S	10K	¼W	Carbon	
	R722	QRD141J-103S	10K	¼W	Carbon	
	R723	QRD141J-392S	3.9K	¼W	Carbon	
	R724	QRD141J-103S	10K	¼W	Carbon	
	R725	QRD141J-223S	22K	¼W	Carbon	
⚠	R726	QRD145J-6R8	6.8	¼W	Unf. Carbon	
⚠	R727	QRD145J-100S	10	¼W	Unf. Carbon	
⚠	R728	QRD145J-100S	10	¼W	Unf. Carbon	
	R730	QRD148J-471S	470	¼W	Carbon	B
	R731	QRD141J-471S	470	¼W	Carbon	B
	R740	QRD141J-473S	47K	¼W	Carbon	
	R741	QRD141J-103S	10K	¼W	Carbon	
	R760	QRD141J-104S	110K	¼W	Carbon	A
	R761	QRD141J-153S	15K	¼W	Carbon	A
	R762	QRD141J-153S	15K	¼W	Carbon	A
	R763	QRD141J-682S	6.8K	¼W	C, Resistor	A
	R764	QRD141J-682S	6.8K	¼W	C, Resistor	A
	R765	QRD141J-153S	15K	¼W	Carbon	A
	R766	QRD141J-153S	15K	¼W	Carbon	A
	R767	QRD141J-472S	4.7K	¼W	Carbon	A
	R768	QRD141J-102S	1K	¼W	Carbon	A
	R770	QRD141J-472S	4.7K	¼W	Carbon	A
	R771	QRD141J-472S	4.7K	¼W	Carbon	A
	R772	QRD141J-472S	4.7K	¼W	Carbon	A
	R773	QRD141J-472S	4.7K	¼W	Carbon	A
	R774	QRD141J-472S	4.7K	¼W	Carbon	A
	R775	QRD141J-472S	4.7K	¼W	Carbon	A
	R776	QRD141J-472S	4.7K	¼W	Carbon	A
	R777	QRD141J-472S	4.7K	¼W	Carbon	A
	R778	QRD141J-472S	4.7K	¼W	Carbon	A
	R779	QRD141J-472S	4.7K	¼W	Carbon	A
	R780	QRD141J-103S	10K	¼W	Carbon	A
	R781	QRD141J-103S	10K	¼W	Carbon	A
	R782	QRD141J-103S	10K	¼W	Carbon	A
	R783	QRD141J-223S	22K	¼W	Carbon	A
	R784	QRD141J-183S	18K	¼W	Carbon	A
	R785	QRD141J-223S	22K	¼W	Carbon	A
	R786	QRD141J-103S	10K	¼W	Carbon	A
	R787	QRD141J-103S	10K	¼W	Carbon	A
	R788	QRD141J-103S	10K	¼W	Carbon	A
	R789	QRD141J-103S	10K	¼W	Carbon	A
	R794	QRD141J-223S	22K	¼W	Carbon	A
	R795	QRD141J-223S	22K	¼W	Carbon	A

⚠: Safety Parts

Others

⚠	Item	Part Number	Description	Areas
	P701	E04636-007	7P Plug Assy	A
	P702	E04363-008	8P Plug Assy	
	P703	E04363-008	8P Plug Assy	
	XT701	ECX0003-580KU	Resonator	
		ELU0001-019	FL Tube	
	RA701	ERGS6XK-152	Resistor Array	
	RA702	ERGS6XK-681	Resistor Array	
	RA703	ERGS6XK-822	Resistor Array	
	RA704	ERGS6XK-392	Resistor Array	
	RA705	ERGS9XK-103	Resistor Array	
	RA706	ERGS3YK-223	Resistor Array	
	RA711	ERGS5XK-273	Resistor Array	A
	RA712	ERGS5XK-273	Resistor Array	A
		E10967-001	Circuit Board	
		EWT011-037	Ter. Wire Assy	
		E68422-003	Bracket	
		SBSB3008N	Tapping Screw	
		E3400-334	Felt Spacer	

sistors

	Item	Part Number	Description			Areas
	R316	QRD141J-104S	110K	¼W	Carbon	
	R317	QRD141J-104S	110K	¼W	Carbon	
	R318	QRD141J-104S	110K	¼W	Carbon	
	R319	QRD141J-221S	220	¼W	Carbon	
	R320	QRD141J-221S	220	¼W	Carbon	
	R321	QRD141J-221S	220	¼W	Carbon	
	R322	QRD141J-221S	220	¼W	Carbon	
	R323	QRD141J-104S	110K	¼W	Carbon	
	R324	QRD141J-104S	110K	¼W	Carbon	
	R325	QRD141J-104S	110K	¼W	Carbon	
	R326	QRD141J-104S	110K	¼W	Carbon	
	R331	QRD141J-153S	15K	¼W	Carbon	
	R332	QRD141J-153S	15K	¼W	Carbon	
	R333	QRD141J-153S	15K	¼W	Carbon	
	R334	QRD141J-153S	15K	¼W	Carbon	
	R335	QRD141J-220S	22	¼W	Carbon	
	R336	QRD141J-220S	22	¼W	Carbon	
	R337	QRD141J-220S	22	¼W	Carbon	
	R338	QRD141J-220S	22	¼W	Carbon	
	R341	QRD141J-472S	4.7K	¼W	Carbon	
	R342	QRD141J-472S	4.7K	¼W	Carbon	
	R343	QRD141J-472S	4.7K	¼W	Carbon	
	R344	QRD141J-472S	4.7K	¼W	Carbon	
	R349	QRD141J-104S	110K	¼W	Carbon	
	R350	QRD141J-104S	110K	¼W	Carbon	
	R351	QRD141J-222S	2.2K	¼W	Carbon	
	R352	QRD141J-222S	2.2K	¼W	Carbon	
	R353	QRD141J-471S	470	¼W	Carbon	
	R354	QRD141J-471S	470	¼W	Carbon	
	R355	QRD141J-821S	820	¼W	Carbon	
	R356	QRD141J-821S	820	¼W	Carbon	
	R357	QRD141J-222S	2.2K	¼W	Carbon	
	R358	QRD141J-222S	2.2K	¼W	Carbon	
	R359	QRD141J-104S	110K	¼W	Carbon	
	R360	QRD141J-104S	110K	¼W	Carbon	
	R363	QRD141J-153S	15K	¼W	Carbon	
	R364	QRD141J-153S	15K	¼W	Carbon	
	R365	QRD141J-220S	22	¼W	Carbon	
	R366	QRD141J-220S	22	¼W	Carbon	
	R370	QRD141J-221S	220	¼W	Carbon	
	R371	QRD141J-153S	15K	¼W	Carbon	
	R372	QRD141J-562S	5.6K	¼W	Carbon	
	R373	QRD141J-272S	2.7K	¼W	Carbon	
	R374	QRD141J-621S	620	¼W	Carbon	
	R375	QRD141J-331S	330	¼W	Carbon	
	R376	QRD141J-104S	110K	¼W	Carbon	
	R377	QRD141J-153S	15K	¼W	Carbon	
	R378	QRD141J-153S	15K	¼W	Carbon	
	R379	QRD141J-153S	15K	¼W	Carbon	
	R380	QRD141J-103S	10K	¼W	Carbon	
	R381	QRD141J-103S	10K	¼W	Carbon	
	R382	QRD141J-474S	470K	¼W	Carbon	
	R383	QRD141J-474S	470K	¼W	Carbon	
	R384	QRD141J-474S	470K	¼W	Carbon	
	R385	QRD141J-474S	470K	¼W	Carbon	
	R386	QRD148J-100S	10	¼W	Carbon	
	R387	QRD141J-223S	22K	¼W	Carbon	
	R388	QRD141J-223S	22K	¼W	Carbon	
	R389	QRD141J-820S	82	¼W	Carbon	
	R390	QRD141J-820S	82	¼W	Carbon	
	R391	QRD141J-820S	82	¼W	Carbon	
	R392	QRD141J-820S	82	¼W	Carbon	
	R393	QRD141J-820S	82	¼W	Carbon	
	R394	QRD141J-820S	82	¼W	Carbon	
	R395	QRD141J-334S	330K	¼W	Carbon	B
	R396	QRD141J-334S	330K	¼W	Carbon	B
	R397	QRD141J-104S	110K	¼W	Carbon	B
	R398	QRD141J-104S	110K	¼W	Carbon	B
△	R834	QRD145J-471S	470	¼W	Unf. Carbon	
△	R851	QRD145J-120S	12	¼W	Unf. Carbon	

Resistors

△	Item	Part Number	Description			Areas
	R901	QRD148J-100S	10	¼W	Carbon	
△	R902	QRD145J-220S	22	¼W	Unf. Carbon	
	R903	QRD141J-103S	10K	¼W	Carbon	
	R904	QRD141J-473S	47K	¼W	Carbon	

△: Safety Parts

Others

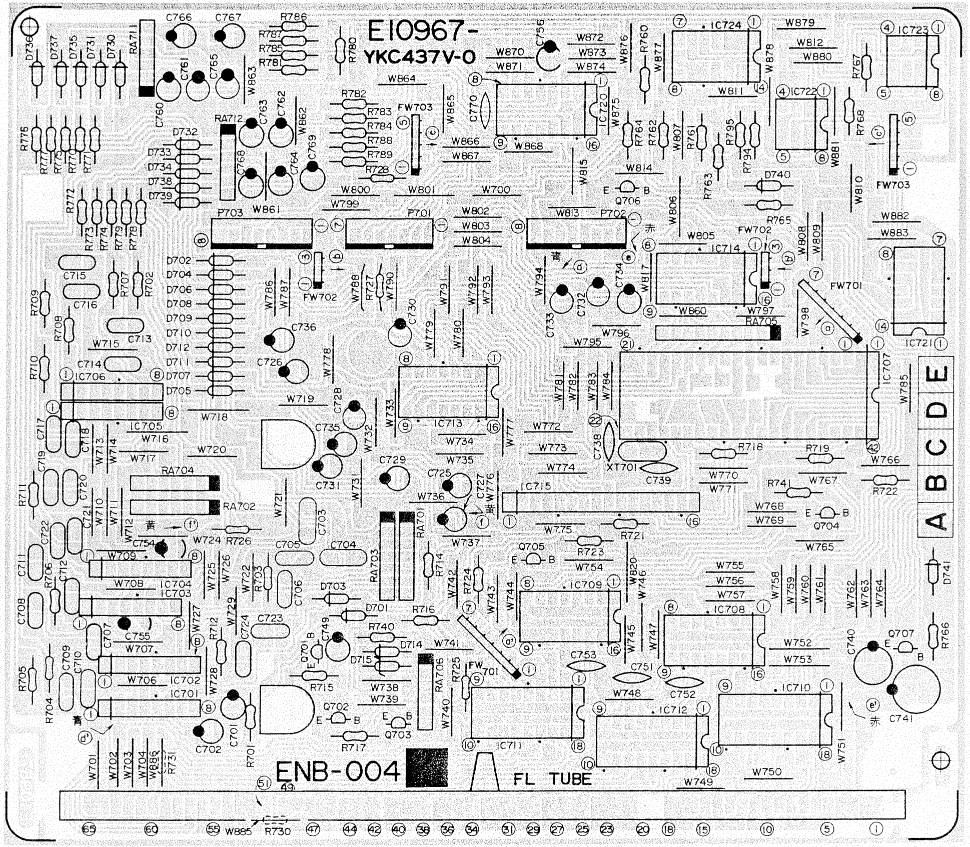
△	Item	Part Number	Description	Areas
	RY301	ESK5D12-212	Relay	
	RY901	ESK2D12-212	Relay	
		E10883-001	Circuit Board	
		E45524-002	Fuse Clip	A
		EMG7331-001	Fuse Clip	B
		SBSB3008M	Screw	
		E70859-001	Earth Plate	
	J303	EMN00TV-403A	Pin Jack Assy	
	J304	EMN00TV-403A	Pin Jack Assy	
	J305	EMN00TV-403A	Pin Jack Assy	
	J306	E03623-003	Din Socket	B
	P301	QMV5005-009	9P Plug Assy	
	P302	QMV5005-005	5P Plug Assy	
	RT811	E67764-103	Wrapping Terminal	
	S251	QST5441-E02	Push Switch	
	S252	QST5441-E02	Push Switch	
	S253	QST5441-E02	Push Switch	
	S254	QST5441-E02	Push Switch	
	S255	QST5441-E01	Push Switch	
	S256	QST5441-E01	Push Switch	
	S257	QST5441-E01	Push Switch	
	S258	QST5441-E01	Push Switch	
	S259	QST5281-E01	Push Switch	
	S260	QST5281-E01	Push Switch	
	S261	QST5281-E01	Push Switch	
	S262	QST5281-E01	Push Switch	

3-(2) ENB-004☐ FL P.C. Board Ass'y

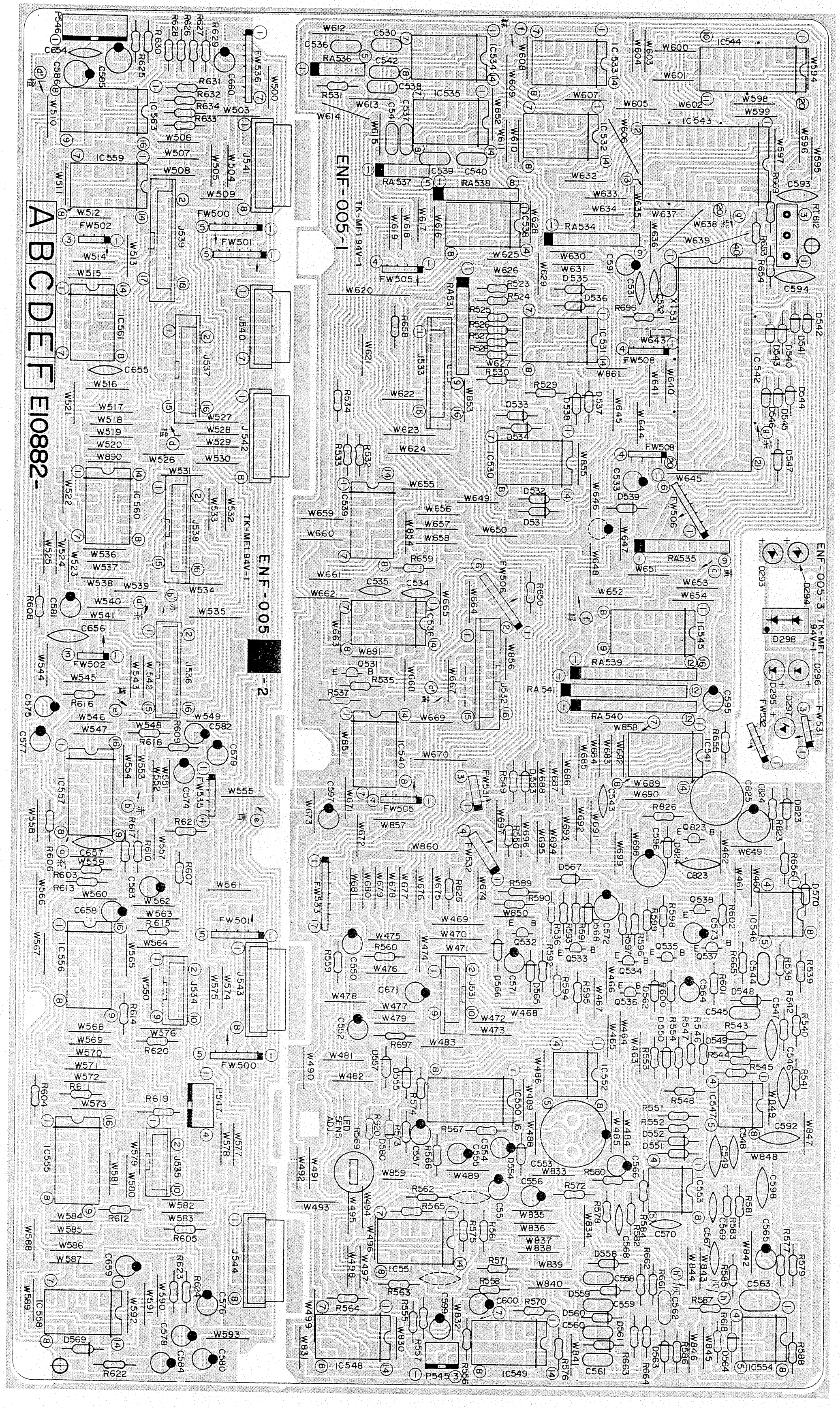
Note: ENB-004☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Description
ENB-004 A	L CH
ENB-004 B	R CH



3-(3) ENF-005 Main CPU P.C. Board Ass'y


A B C D E F E10882-
ENF-005-2
TK-MF1 94V-1
ENF-005-1
TK-MF1 94V-1
ENF-005-3 TK-MF1 94V-1
LED SENS. ADJ.
IC530
IC531
IC532
IC533
IC534
IC535
IC539
IC540
IC541
IC542
IC543
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IC563
J531
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J539
J540
J541
J542
J543
J544
RA531
RA534
RA535
RA536
RA537
RA538
RA539
RA540
RA541
X531
RT812
P545
P546
P547

sistors

	Item	Part Number	Description			Areas
	R316	QRD141J-104S	110K	¼W	Carbon	
	R317	QRD141J-104S	110K	¼W	Carbon	
	R318	QRD141J-104S	110K	¼W	Carbon	
	R319	QRD141J-221S	220	¼W	Carbon	
	R320	QRD141J-221S	220	¼W	Carbon	
	R321	QRD141J-221S	220	¼W	Carbon	
	R322	QRD141J-221S	220	¼W	Carbon	
	R323	QRD141J-104S	110K	¼W	Carbon	
	R324	QRD141J-104S	110K	¼W	Carbon	
	R325	QRD141J-104S	110K	¼W	Carbon	
	R326	QRD141J-104S	110K	¼W	Carbon	
	R331	QRD141J-153S	15K	¼W	Carbon	
	R332	QRD141J-153S	15K	¼W	Carbon	
	R333	QRD141J-153S	15K	¼W	Carbon	
	R334	QRD141J-153S	15K	¼W	Carbon	
	R335	QRD141J-220S	22	¼W	Carbon	
	R336	QRD141J-220S	22	¼W	Carbon	
	R337	QRD141J-220S	22	¼W	Carbon	
	R338	QRD141J-220S	22	¼W	Carbon	
	R341	QRD141J-472S	4.7K	¼W	Carbon	
	R342	QRD141J-472S	4.7K	¼W	Carbon	
	R343	QRD141J-472S	4.7K	¼W	Carbon	
	R344	QRD141J-472S	4.7K	¼W	Carbon	
	R349	QRD141J-104S	110K	¼W	Carbon	
	R350	QRD141J-104S	110K	¼W	Carbon	
	R351	QRD141J-222S	2.2K	¼W	Carbon	
	R352	QRD141J-222S	2.2K	¼W	Carbon	
	R353	QRD141J-471S	470	¼W	Carbon	
	R354	QRD141J-471S	470	¼W	Carbon	
	R355	QRD141J-821S	820	¼W	Carbon	
	R356	QRD141J-821S	820	¼W	Carbon	
	R357	QRD141J-222S	2.2K	¼W	Carbon	
	R358	QRD141J-222S	2.2K	¼W	Carbon	
	R359	QRD141J-104S	110K	¼W	Carbon	
	R360	QRD141J-104S	110K	¼W	Carbon	
	R363	QRD141J-153S	15K	¼W	Carbon	
	R364	QRD141J-153S	15K	¼W	Carbon	
	R365	QRD141J-220S	22	¼W	Carbon	
	R366	QRD141J-220S	22	¼W	Carbon	
	R370	QRD141J-221S	220	¼W	Carbon	
	R371	QRD141J-153S	15K	¼W	Carbon	
	R372	QRD141J-562S	5.6K	¼W	Carbon	
	R373	QRD141J-272S	2.7K	¼W	Carbon	
	R374	QRD141J-621S	620	¼W	Carbon	
	R375	QRD141J-331S	330	¼W	Carbon	
	R376	QRD141J-104S	110K	¼W	Carbon	
	R377	QRD141J-153S	15K	¼W	Carbon	
	R378	QRD141J-153S	15K	¼W	Carbon	
	R379	QRD141J-153S	15K	¼W	Carbon	
	R380	QRD141J-103S	10K	¼W	Carbon	
	R381	QRD141J-103S	10K	¼W	Carbon	
	R382	QRD141J-474S	470K	¼W	Carbon	
	R383	QRD141J-474S	470K	¼W	Carbon	
	R384	QRD141J-474S	470K	¼W	Carbon	
	R385	QRD141J-474S	470K	¼W	Carbon	
	R386	QRD148J-100S	10	¼W	Carbon	
	R387	QRD141J-223S	22K	¼W	Carbon	
	R388	QRD141J-223S	22K	¼W	Carbon	
	R389	QRD141J-820S	82	¼W	Carbon	
	R390	QRD141J-820S	82	¼W	Carbon	
	R391	QRD141J-820S	82	¼W	Carbon	
	R392	QRD141J-820S	82	¼W	Carbon	
	R393	QRD141J-820S	82	¼W	Carbon	
	R394	QRD141J-820S	82	¼W	Carbon	
	R395	QRD141J-334S	330K	¼W	Carbon	B
	R396	QRD141J-334S	330K	¼W	Carbon	B
	R397	QRD141J-104S	110K	¼W	Carbon	B
	R398	QRD141J-104S	110K	¼W	Carbon	B
⚠	R834	QRD145J-471S	470	¼W	Unf. Carbon	
⚠	R851	QRD145J-120S	12	¼W	Unf. Carbon	

Resistors

⚠	Item	Part Number	Description			Areas
	R901	QRD148J-100S	10	¼W	Carbon	
⚠	R902	QRD145J-220S	22	¼W	Unf. Carbon	
	R903	QRD141J-103S	10K	¼W	Carbon	
	R904	QRD141J-473S	47K	¼W	Carbon	

⚠: Safety Parts

Others

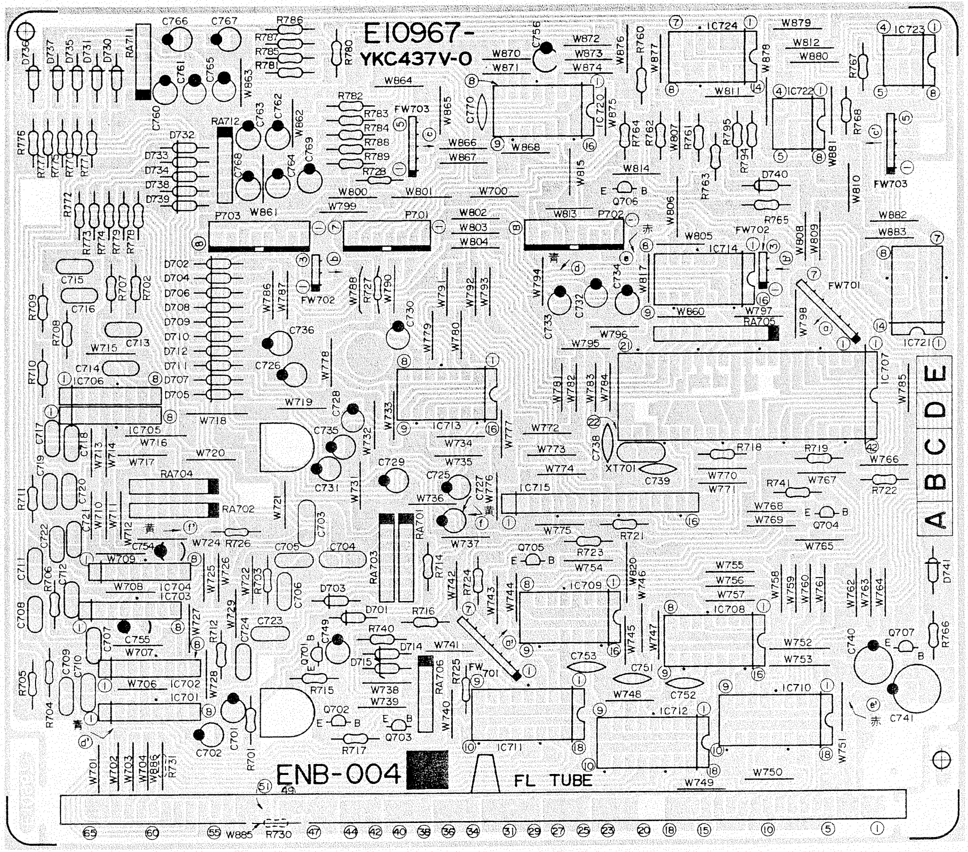
⚠	Item	Part Number	Description	Areas
	RY301	ESK5D12-212	Relay	
	RY901	ESK2D12-212	Relay	
		E10883-001	Circuit Board	
		E45524-002	Fuse Clip	A
		EMG7331-001	Fuse Clip	B
		SBSB3008M	Screw	
		E70859-001	Earth Plate	
	J303	EMN00TV-403A	Pin Jack Assy	
	J304	EMN00TV-403A	Pin Jack Assy	
	J305	EMN00TV-403A	Pin Jack Assy	
	J306	E03623-003	Din Socket	B
	P301	QMV5005-009	9P Plug Assy	
	P302	QMV5005-005	5P Plug Assy	
	RT811	E67764-103	Wrapping Terminal	
	S251	QST5441-E02	Push Switch	
	S252	QST5441-E02	Push Switch	
	S253	QST5441-E02	Push Switch	
	S254	QST5441-E02	Push Switch	
	S255	QST5441-E01	Push Switch	
	S256	QST5441-E01	Push Switch	
	S257	QST5441-E01	Push Switch	
	S258	QST5441-E01	Push Switch	
	S259	QST5281-E01	Push Switch	
	S260	QST5281-E01	Push Switch	
	S261	QST5281-E01	Push Switch	
	S262	QST5281-E01	Push Switch	

3-(2) ENB-004☐ FL P.C. Board Ass'y

Note: ENB-004☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Description
ENB-004 A	L CH
ENB-004 B	R CH



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⚠	Item	Part Number	Description		Areas
				Maker	
	Q701	2SA1015(O,Y)	Silicon	Toshiba	
	Q702	2SA1015(O,Y)	Silicon	Toshiba	
	Q703	2SA1015(O,Y)	Silicon	Toshiba	
	Q704	2SC1815(GR,BL)	Silicon	Toshiba	
	Q705	2SA1015(O,Y)	Silicon	Toshiba	
	Q706	2SA1015(O,Y)	Silicon	Toshiba	A
	Q707	2SA1015(O,Y)	Silicon	Toshiba	A

s

⚠	Item	Part Number	Description		Areas
				Maker	
	IC701	M5218L		Ryoyo	
	IC702	M5218L		Ryoyo	
	IC703	M5218L		Ryoyo	
	IC704	M5218L		Ryoyo	
	IC705	M5218L		Ryoyo	
	IC706	M5218L		Ryoyo	
	IC707	UPD1511AC-039		NEC	
	IC708	SN74LS138N			
	IC709	SN74LS138N			
	IC710	AN6873N		Matsushita	
	IC711	AN6873N		Matsushita	
	IC712	AN6873N		Matsushita	
	IC713	TC4051BP		Toshiba	
	IC714	TC4051BP		Toshiba	
	IC715	ENZ2002-002			
	IC720	TC4051BP		Toshiba	A
	IC721	TC4011BP		Toshiba	A
	IC722	NJM4560D-X		Dainichi	A
	IC723	NJM4560D-X		Dainichi	A
	IC724	TC4066BP		Toshiba	A

odes

⚠	Item	Part Number	Description		Areas
				Maker	
	D701	1S2076-31	Silicon	Hitachi	
	D702	1S2076-31	Silicon	Hitachi	
	D703	1S2076-31	Silicon	Hitachi	
	D704	1S2076-31	Silicon	Hitachi	
	D705	1S2076-31	Silicon	Hitachi	
	D706	1S2076-31	Silicon	Hitachi	
	D707	1S2076-31	Silicon	Hitachi	
	D708	1S2076-31	Silicon	Hitachi	
	D709	1S2076-31	Silicon	Hitachi	
	D710	1S2076-31	Silicon	Hitachi	
	D711	1S2076-31	Silicon	Hitachi	
	D712	1S2076-31	Silicon	Hitachi	
	D714	1S2076-31	Silicon	Hitachi	
	D715	RD5.6EB3	Silicon	NEC	
	D730	1S2076-31	Silicon	Hitachi	A
	D731	1S2076-31	Silicon	Hitachi	A
	D732	1S2076-31	Silicon	Hitachi	A
	D733	1S2076-31	Silicon	Hitachi	A
	D734	1S2076-31	Silicon	Hitachi	A
	D735	1S2076-31	Silicon	Hitachi	A
	D736	1S2076-31	Silicon	Hitachi	A
	D737	1S2076-31	Silicon	Hitachi	A
	D738	1S2076-31	Silicon	Hitachi	A
	D739	1S2076-31	Silicon	Hitachi	A
	D740	1S2076-31	Silicon	Hitachi	A
	D741	1S2076-31	Silicon	Hitachi	A

Capacitors

⚠	Item	Part Number	Description			Areas
	C701	QET61HM-105	1MF	50V	Electro	
	C702	QET61HM-105	1MF	50V	Electro	
	C703	QFV81HJ-474	0.47MF	50V	T. Film	
	C704	QFV81HJ-564	0.56MF	50V	T. Film	
	C705	QFV81HJ-224	0.22MF	50V	T. Film	
	C706	QFV81HJ-274	0.27MF	50V	T. Film	
	C707	QFV71HJ-124	0.12MF	50V	T. Film	
	C708	QFV71HJ-124	0.12MF	50V	T. Film	
	C709	QFN81HJ-623	0.062MF	50V	T. Film	
	C710	QFV71HJ-683	0.068MF	50V	T. Film	
	C711	QFV71HJ-333	0.033MF	50V	T. Film	
	C712	QFV71HJ-333	0.033MF	50V	T. Film	
	C713	QFV71HJ-333	0.033MF	50V	T. Film	
	C714	QFV71HJ-333	0.033MF	50V	T. Film	
	C715	QFN31HJ-153	0.015MF	50V	Mylar	
	C716	QFN31HJ-183	0.018MF	50V	Mylar	
	C717	QFP31HJ-822	8200PF	50V	Poly	
	C718	QFP81HJ-822	8200PF	50V	Poly	
	C719	QFP81HG-432	4300PF	50V	Poly	
	C720	QFP81HG-432	4300PF	50V	Poly	
	C721	QFP81HG-202	2000PF	50V	Poly	
	C722	QFP81HJ-222	2200PF	50V	Poly	
	C723	QFP31HJ-102	1000PF	50V	Poly	
	C724	QFP81HJ-102	1000PF	50V	Poly	
	C725	QET61HM-225	2.2MF	50V	Electro	
	C726	QET61HM-225	2.2MF	50V	Electro	
	C727	QET61HM-225	2.2MF	50V	Electro	
	C728	QET61HM-225	2.2MF	50V	Electro	
	C729	QET61HM-225	2.2MF	50V	Electro	
	C730	QET61HM-225	2.2MF	50V	Electro	
	C731	QET61HM-225	2.2MF	50V	Electro	
	C732	QET61HM-225	2.2MF	50V	Electro	
	C733	QET61HM-225	2.2MF	50V	Electro	
	C734	QET61HM-225	2.2MF	50V	Electro	
	C735	QET51HM-225	2.2MF	50V	Electro	
	C736	QET61HM-225	2.2MF	50V	Electro	
	C738	QCS31HJ-470	47PF	50V	Ceramic	
	C739	QCS31HJ-470	47PF	50V	Ceramic	
	C740	QET61AM-227	220PF	10V	Electro	
	C741	QET51HM-225	2.2MF	50V	Electro	
	C749	QET61CM-226	22MF	16V	Electro	
	C751	QCS31HJ-221	220PF	50V	Ceramic	
	C752	QCS31HJ-221	220PF	50V	Ceramic	
	C753	QCS31HJ-221	220PF	50V	Ceramic	
	C754	QETC1CM-476	47MF	16V	Electro	
	C755	QETC1CM-476	47MF	16V	Electro	
	C756	QETC1CM-476	47MF	16V	Electro	
	C760	QET61EM-106	10MF	25V	Electro	A
	C761	QET61EM-106	10MF	25V	Electro	A
	C762	QET61EM-106	10MF	25V	Electro	A
	C763	QET61EM-106	10MF	25V	Electro	A
	C764	QET61EM-106	10MF	25V	Electro	A
	C765	QET61CM-226	22MF	16V	Electro	
	C766	QET61CM-226	22MF	16V	Electro	
	C767	QET61CM-226	22MF	16V	Electro	
	C768	QET61CM-476	47MF	16V	Electro	A
	C769	QET61CM-476	47MF	16V	Electro	A
	C770	QCY21HK-102	1000PF	50V	Ceramic	A
	C830	QCE22HP-103	0.01UF	500V	Ceramic	

Resistors

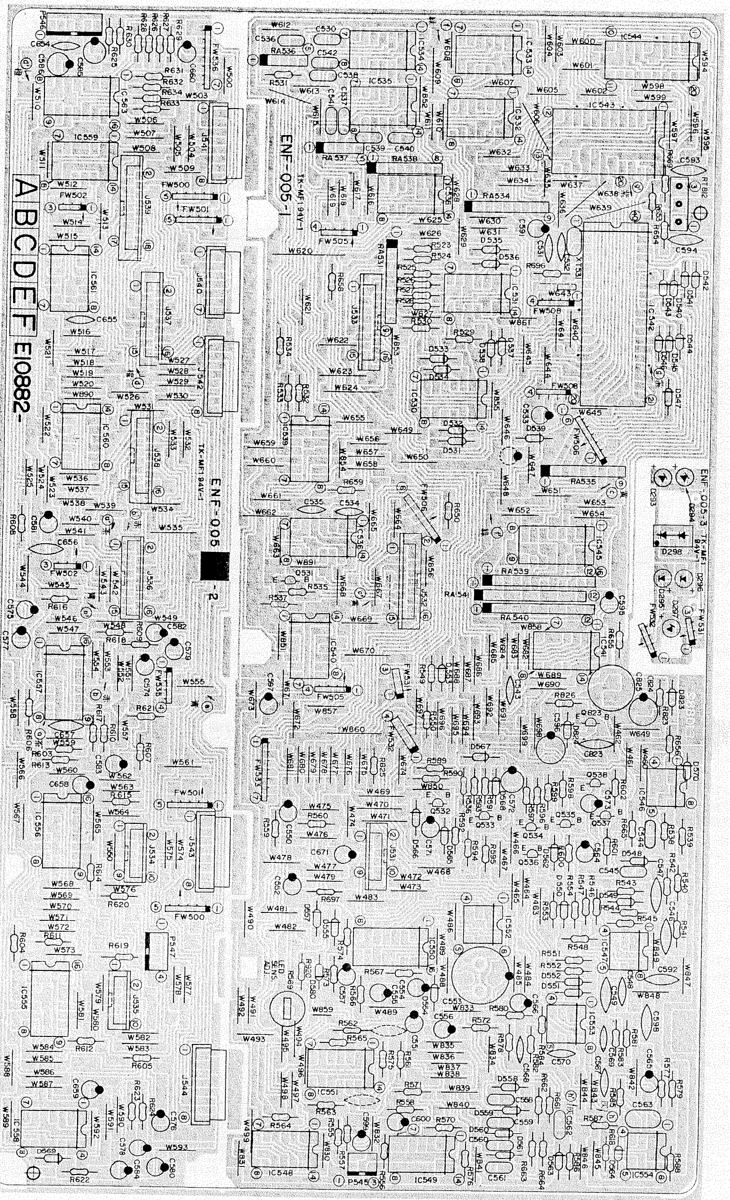
⚠	Item	Part Number	Description			Areas
	R701	QRD141J-823S	82K	¼W	Carbon	
	R702	QRD141J-753S	75K	¼W	Carbon	
	R703	QRD141J-753S	75K	¼W	Carbon	
	R704	QRD141J-823S	82K	¼W	Carbon	
	R705	QRD141J-753S	75K	¼W	Carbon	
	R706	QRD141J-823S	82K	¼W	Carbon	
	R707	QRD141J-393S	39K	¼W	Carbon	
	R708	QRD141J-393S	39K	¼W	Carbon	
	R709	QRD141J-393S	39K	¼W	Carbon	
	R710	QRD141J-393S	39K	¼W	Carbon	
	R711	QRD141J-393S	39K	¼W	Carbon	
	R712	QRD141J-433S	43K	¼W	Carbon	
	R714	QRD141J-103S	10K	¼W	Carbon	
	R715	QRD141J-153S	15K	¼W	Carbon	
	R716	QRD141J-103S	10K	¼W	Carbon	
	R717	QRD141J-221S	220	¼W	Carbon	
	R718	QRD141J-101S	100	¼W	Carbon	
	R719	QRD141J-103S	10K	¼W	Carbon	
	R721	QRD141J-103S	10K	¼W	Carbon	
	R722	QRD141J-103S	10K	¼W	Carbon	
	R723	QRD141J-392S	3.9K	¼W	Carbon	
	R724	QRD141J-103S	10K	¼W	Carbon	
	R725	QRD141J-223S	22K	¼W	Carbon	
⚠	R726	QRD145J-6R8	6.8	¼W	Unf. Carbon	
⚠	R727	QRD145J-100S	10	¼W	Unf. Carbon	
⚠	R728	QRD145J-100S	10	¼W	Unf. Carbon	
	R730	QRD148J-471S	470	¼W	Carbon	B
	R731	QRD141J-471S	470	¼W	Carbon	B
	R740	QRD141J-473S	47K	¼W	Carbon	
	R741	QRD141J-103S	10K	¼W	Carbon	
	R760	QRD141J-104S	110K	¼W	Carbon	A
	R761	QRD141J-153S	15K	¼W	Carbon	A
	R762	QRD141J-153S	15K	¼W	Carbon	A
	R763	QRD141J-682S	6.8K	¼W	C, Resistor	A
	R764	QRD141J-682S	6.8K	¼W	C, Resistor	A
	R765	QRD141J-153S	15K	¼W	Carbon	A
	R766	QRD141J-153S	15K	¼W	Carbon	A
	R767	QRD141J-472S	4.7K	¼W	Carbon	A
	R768	QRD141J-102S	1K	¼W	Carbon	A
	R770	QRD141J-472S	4.7K	¼W	Carbon	A
	R771	QRD141J-472S	4.7K	¼W	Carbon	A
	R772	QRD141J-472S	4.7K	¼W	Carbon	A
	R773	QRD141J-472S	4.7K	¼W	Carbon	A
	R774	QRD141J-472S	4.7K	¼W	Carbon	A
	R775	QRD141J-472S	4.7K	¼W	Carbon	A
	R776	QRD141J-472S	4.7K	¼W	Carbon	A
	R777	QRD141J-472S	4.7K	¼W	Carbon	A
	R778	QRD141J-472S	4.7K	¼W	Carbon	A
	R779	QRD141J-472S	4.7K	¼W	Carbon	A
	R780	QRD141J-103S	10K	¼W	Carbon	A
	R781	QRD141J-103S	10K	¼W	Carbon	A
	R782	QRD141J-103S	10K	¼W	Carbon	A
	R783	QRD141J-223S	22K	¼W	Carbon	A
	R784	QRD141J-183S	18K	¼W	Carbon	A
	R785	QRD141J-223S	22K	¼W	Carbon	A
	R786	QRD141J-103S	10K	¼W	Carbon	A
	R787	QRD141J-103S	10K	¼W	Carbon	A
	R788	QRD141J-103S	10K	¼W	Carbon	A
	R789	QRD141J-103S	10K	¼W	Carbon	A
	R794	QRD141J-223S	22K	¼W	Carbon	A
	R795	QRD141J-223S	22K	¼W	Carbon	A

⚠: Safety Parts

Others

⚠	Item	Part Number	Description	Areas
	P701	E04636-007	7P Plug Assy	A
	P702	E04363-008	8P Plug Assy	
	P703	E04363-008	8P Plug Assy	
	XT701	ECX0003-580KU	Resonator	
		ELU0001-019	FL Tube	
	RA701	ERGS6XK-152	Resistor Array	
	RA702	ERGS6XK-681	Resistor Array	
	RA703	ERGS6XK-822	Resistor Array	
	RA704	ERGS6XK-392	Resistor Array	
	RA705	ERGS9XK-103	Resistor Array	
	RA706	ERGS3YK-223	Resistor Array	
	RA711	ERGS5XK-273	Resistor Array	A
	RA712	ERGS5XK-273	Resistor Array	A
		E10967-001	Circuit Board	
		EWT011-037	Ter. Wire Assy	
		E68422-003	Bracket	
		SBSB3008N	Tapping Screw	
		E3400-334	Felt Spacer	

-(3) ENF-005 Main CPU P.C. Board Ass'y



Transistors

⚠	Item	Part Number	Description		Areas
				Maker	
	Q531	2SA1015(O,Y)	Silicon	Toshiba	
	Q532	2SC1815(GR,BL)	Silicon	Toshiba	
	Q533	2SC1815(GR,BL)	Silicon	Toshiba	
	Q534	2SC1815(GR,BL)	Silicon	Toshiba	
	Q535	2SC1815(GR,BL)	Silicon	Toshiba	
	Q536	2SC1815(GR,BL)	Silicon	Toshiba	
	Q537	2SC1815(GR,BL)	Silicon	Toshiba	
	Q538	2SA1015(O,Y)	Silicon	Toshiba	
	Q823	2SC1815(GR,BL)	Silicon	Toshiba	

ICs

⚠	Item	Part Number	Description		Areas
				Maker	
	IC530	TC4081BP		Toshiba	
	IC531	TC4081BP		Toshiba	
	IC532	TC4011BP		Toshiba	
	IC533	TC4011BP		Toshiba	
	IC534	TC4011BP		Toshiba	
	IC535	TC4011BP		Toshiba	
	IC536	TC40H000P		Toshiba	
	IC538	TC4069UBP		Toshiba	
	IC539	TC4069UBP		Toshiba	
	IC540	SN74LS00N			
	IC541	TC4066BP		Toshiba	
	IC542	UPD80C39C		NEC	
	IC543	UPD2732D-001		NEC	
	IC544	SN74LS273N			
	IC545	TC4050BP		Toshiba	
	IC546	LA6393D		Sanyo	
	IC547	NJM4560D-X		Dainichi	
	IC548	TC4066BP		Toshiba	
	IC549	TC4066BP		Toshiba	
	IC550	TC9153P		Toshiba	
	IC551	LA6339		Sanyo	
	IC552	NJM4560D-X		Dainichi	
	IC553	NJM4560D-X		Dainichi	
	IC554	NJM4560D-X		Dainichi	
	IC555	BA823			
	IC556	BA823			
	IC557	BA823			
	IC558	TC4011BP		Toshiba	
	IC559	SN74LS00N			
	IC560	SN74LS00N			
	IC561	SN74LS38N			
	IC563	TC4051BP		Toshiba	

Diodes

⚠	Item	Part Number	Description		Areas
				Maker	
	D293	SLR-34VC50F	L.E.D.	Rohm	
	D294	SLR-34VC50F	L.E.D.	Rohm	
	D295	SLR-34VC50F	L.E.D.	Rohm	
	D296	SLR-34VC50F	L.E.D.	Rohm	
	D297	SLR-34VC50F	L.E.D.	Rohm	
	D298	LD-001UR	L.E.D.		
	D531	1S2076-31	Silicon	Hitachi	
	D532	1S2076-31	Silicon	Hitachi	
	D533	1S2076-31	Silicon	Hitachi	
	D534	1S2076-31	Silicon	Hitachi	
	D535	1S2076-31	Silicon	Hitachi	
	D536	1S2076-31	Silicon	Hitachi	
	D537	1S2076-31	Silicon	Hitachi	
	D538	1S2076-31	Silicon	Hitachi	
	D539	1S2076-31	Silicon	Hitachi	

Diodes

⚠	Item	Part Number	Description		Areas
				Maker	
	D540	1S2076-31	Silicon	Hitachi	
	D541	1S2076-31	Silicon	Hitachi	
	D542	1S2076-31	Silicon	Hitachi	
	D543	1S2076-31	Silicon	Hitachi	
	D544	1S2076-31	Silicon	Hitachi	
	D545	1S2076-31	Silicon	Hitachi	
	D546	1S2076-31	Silicon	Hitachi	
	D547	1S2076-31	Silicon	Hitachi	
	D548	1S2076-31	Silicon	Hitachi	
	D549	1S2076-31	Silicon	Hitachi	
	D550	1S2076-31	Silicon	Hitachi	
	D551	1S2076-31	Silicon	Hitachi	
	D552	1S2076-31	Silicon	Hitachi	
	D553	1S2076-31	Silicon	Hitachi	
	D554	1S2076-31	Silicon	Hitachi	
	D555	1S2076-31	Silicon	Hitachi	
	D557	1S2076-31	Silicon	Hitachi	
	D558	1S2076-31	Silicon	Hitachi	
	D559	1S2076-31	Silicon	Hitachi	
	D560	1S2076-31	Silicon	Hitachi	
	D561	1S2076-31	Silicon	Hitachi	
	D562	1S2076-31	Silicon	Hitachi	
	D563	1S2076-31	Silicon	Hitachi	
	D564	1S2076-31	Silicon	Hitachi	
	D565	1S2076-31	Silicon	Hitachi	
	D567	1S2076-31	Silicon	Hitachi	
	D568	1S2076-31	Silicon	Hitachi	
	D569	1S2076-31	Silicon	Hitachi	
	D570	1S2076-31	Silicon	Hitachi	
	D580	RD3.9EB2	Zener	NEC	
	D823	1S2076-31	Silicon	Hitachi	
	D824	RD6.2EB3	Zener	NEC	

Capacitors

⚠	Item	Part Number	Description			Areas
	C530	QFN31HK-102	1000PF	50V	Mylar	
	C531	QCS31HJ-470	47PF	50V	Ceramic	
	C532	QCS31HJ-470	47PF	50V	Ceramic	
	C533	QET61HM-105	1MF	50V	Electro	
	C534	QCS21HJ-821	820PF	50V	Ceramic	
	C535	QCS31HJ-100	10PF	50V	Ceramic	
	C536	QFN31HK-102	1000PF	50V	Mylar	
	C537	QFN31HK-102	1000PF	50V	Mylar	
	C538	QFN81HK-102	1000PF	50V	Mylar	
	C539	QFN31HK-102	1000PF	50V	Mylar	
	C540	QFN81HK-102	1000PF	50V	Mylar	
	C541	QFN81HK-102	1000PF	50V	Mylar	
	C542	QFN31HK-102	1000PF	50V	Mylar	
	C543	QCS31HJ-560	56PF	50V	Ceramic	
	C544	QFN31HK-222	2200PF	50V	Mylar	
	C545	QFN31HK-123	0.012MF	50V	Mylar	
	C546	QCS31HJ-470	47PF	50V	Ceramic	
	C547	QCS31HJ-471	470PF	50V	Ceramic	
	C548	QCS31HJ-220	22PF	50V	Ceramic	
	C549	QCS31HJ-471	470PF	50V	Ceramic	
	C550	QET61EM-106	10MF	25V	Electro	
	C551	QET61HM-475	4.7MF	50V	Electro	
	C552	QET61CM-476	47MF	16V	Electro	
	C553	QET51CM-228	2200MF	16V	Electro	
	C554	QET61AM-227	220MF	10V	Electro	
	C555	QET61CM-226	22MF	16V	Electro	
	C556	QET61HM-475	4.7MF	50V	Electro	
	C557	QET61HM-475	4.7MF	50V	Electro	
	C558	QFN31HK-103	0.01MF	50V	Mylar	
	C559	QFN31HK-103	0.01MF	50V	Mylar	

apacitors

⚠	Item	Part Number	Description			Areas
	C560	QFN31HK-103	0.01MF	50V	Mylar	
	C561	QFN31HK-103	0.01MF	50V	Mylar	
	C563	QFN31HK-473	0.047MF	50V	Mylar	
	C564	QET61HM-105	1MF	50V	Electro	
	C565	QET61HM-105	1MF	50V	Electro	
	C566	QET61HM-105	1MF	50V	Electro	
	C567	QCS31HJ-151	150PF	50V	Ceramic	
	C568	QCS31HJ-151	150PF	50V	Ceramic	
	C569	QCS31HJ-820	82PF	50V	Ceramic	
	C570	QCS31HJ-820	82PF	50V	Ceramic	
	C571	QET61EM-106	10MF	25V	Electro	
	C572	QET61AM-476	47MF	10V	Electro	
	C573	QET61AM-476	47MF	10V	Electro	
	C574	QET61HM-475	4.7MF	50V	Electro	
	C575	QET61HM-105	1MF	50V	Electro	
	C576	QET61HM-475	4.7MF	50V	Electro	
	C577	QET61HM-475	4.7MF	50V	Electro	
	C578	QET61HM-475	4.7MF	50V	Electro	
	C579	QET61HM-475	4.7MF	50V	Electro	
	C580	QET61HM-475	4.7MF	50V	Electro	
	C581	QET61HM-475	4.7MF	50V	Electro	
	C582	QET61HM-475	4.7MF	50V	Electro	
	C583	QET61HM-475	4.7MF	50V	Electro	
	C584	QET61HM-105	1MF	50V	Electro	
	C585	QET61CM-476	47MF	16V	Electro	
	C586	QET61CM-476	47MF	16V	Electro	
	C591	QET61AM-476	47MF	16V	Electro	
	C593	QCF31HP-103	0.01MF	50V	Ceramic	
	C594	QCF31HP-103	0.01MF	50V	Ceramic	
	C595	QET61EM-106	10MF	25V	Electro	
	C596	QET60JM-227	220MF	6.3V	Electro	
	C597	QET61CM-226	22MF	16V	Electro	
	C598	QCF31HP-103	0.01MF	50V	Ceramic	
	C599	QET61CM-226	22MF	16V	Electro	
	C600	QET61CM-226	22MF	16V	Electro	
	C654	QCS31HJ-181	180PF	50V	Ceramic	
	C655	QCF31HP-103	0.01MF	50V	Ceramic	
	C656	QCF31HP-103	0.01MF	50V	Ceramic	
	C657	QCF31HP-103	0.01MF	50V	Ceramic	
	C658	QET61AM-476	47MF	10V	Electro	
	C659	QET61AM-476	47MF	10V	Electro	
	C660	QET61AM-476	47MF	10V	Electro	
	C823	QCF31HP-103	0.01MF	50V	Ceramic	
	C824	QET51AM-477	470MF	10V	Electro	
	C825	EEZ0501-229			Electro	

esistors

⚠	Item	Part Number	Description			Areas
	R523	QRD141J-222S	2.2K	¼W	Carbon	
	R524	QRD141J-222S	2.2K	¼W	Carbon	
	R525	QRD141J-222S	2.2K	¼W	Carbon	
	R526	QRD141J-222S	2.2K	¼W	Carbon	
	R527	QRD141J-222S	2.2K	¼W	Carbon	
	R528	QRD141J-222S	2.2K	¼W	Carbon	
	R529	QRD141J-222S	2.2K	¼W	Carbon	
	R530	QRD141J-222S	2.2K	¼W	Carbon	
	R531	QRD141J-103S	10K	¼W	Carbon	
	R532	QRD141J-103S	10K	¼W	Carbon	
	R533	QRD141J-103S	10K	¼W	Carbon	
	R534	QRD141J-103S	10K	¼W	Carbon	
	R535	QRD141J-222S	2.2K	¼W	Carbon	
	R536	QRD141J-222S	2.2K	¼W	Carbon	
	R537	QRD141J-102S	1K	¼W	Carbon	
	R538	QRD141J-222S	2.2K	¼W	Carbon	
	R539	QRD141J-222S	2.2K	¼W	Carbon	
	R540	QRD141J-471S	470	¼W	Carbon	
	R541	QRD141J-303S	30K	¼W	Carbon	
	R542	QRD141J-473S	47K	¼W	Carbon	

Resistors

⚠	Item	Part Number	Description			Areas
	R543	QRD141J-334S	330K	¼W	Carbon	
	R544	QRD141J-333S	33K	¼W	Carbon	
	R545	QRD141J-473S	47K	¼W	Carbon	
	R546	QRD141J-824S	820K	¼W	Carbon	
	R547	QRD141J-334S	330K	¼W	Carbon	
	R548	QRD141J-224S	220K	¼W	Carbon	
	R549	QRD141J-124S	120K	¼W	Carbon	
	R550	QRD141J-473S	47K	¼W	Carbon	
	R551	QRD141J-222S	2.2K	¼W	Carbon	
	R552	QRD141J-822S	8.2K	¼W	Carbon	
	R553	QRD141J-823S	82K	¼W	Carbon	
	R554	QRD141J-184S	180K	¼W	Carbon	
	R555	QRD141J-562S	5.6K	¼W	Carbon	
	R556	QRD141J-562S	5.6K	¼W	Carbon	
	R557	QRD141J-472S	4.7K	¼W	Carbon	
	R558	QRD141J-472S	4.7K	¼W	Carbon	
	R559	QRD141J-101S	100	¼W	Carbon	
	R560	QRD141J-104S	110K	¼W	Carbon	
	R561	QRD141J-103S	10K	¼W	Carbon	
	R562	QRD141J-103S	10K	¼W	Carbon	
	R563	QRD141J-223S	22K	¼W	Carbon	
	R564	QRD141J-223S	22K	¼W	Carbon	
	R565	QRD141J-223S	22K	¼W	Carbon	
	R566	QRD141J-823S	82K	¼W	Carbon	
	R567	QRD141J-823S	82K	¼W	Carbon	
	R569	QVP4A0B-222	2.2K	0.1W	Valiable	
	R570	QRD141J-153S	15K	¼W	Carbon	
	R571	QRD141J-682S	6.8K	¼W	Carbon	
	R572	QRD141J-104S	110K	¼W	Carbon	
	R573	QRD141J-104S	110K	¼W	Carbon	
	R574	QRD141J-273S	27K	¼W	Carbon	
	R575	QRD141J-223S	22K	¼W	Carbon	
	R576	QRD141J-223S	22K	¼W	Carbon	
	R577	QRD141J-473S	47K	¼W	Carbon	
	R578	QRD141J-473S	47K	¼W	Carbon	
	R579	QRD141J-101S	100	¼W	Carbon	
	R580	QRD141J-101S	100	¼W	Carbon	
	R581	QRD141J-121S	120	¼W	Carbon	
	R582	QRD141J-121S	120	¼W	Carbon	
	R583	QRD141J-103S	10K	¼W	Carbon	
	R584	QRD141J-103S	10K	¼W	Carbon	
	R585	QRD141J-332S	3.3K	¼W	Carbon	
	R586	QRD141J-105S	1M	¼W	Carbon	
	R587	QRD141J-102S	1K	¼W	Carbon	
	R588	QRD141J-105S	1M	¼W	Carbon	
	R589	QRD141J-223S	22K	¼W	Carbon	
	R590	QRD141J-223S	22K	¼W	Carbon	
	R591	QRD141J-103S	10K	¼W	Carbon	
	R592	QRD141J-273S	27K	¼W	Carbon	
	R593	QRD141J-332S	3.3K	¼W	Carbon	
	R594	QRD141J-682S	6.8K	¼W	Carbon	
	R595	QRD141J-512S	5.1K	¼W	Carbon	
	R596	QRD141J-103S	10K	¼W	Carbon	
	R597	QRD141J-332S	3.3K	¼W	Carbon	
	R598	QRD141J-103S	10K	¼W	Carbon	
	R599	QRD141J-102S	1K	¼W	Carbon	
	R600	QRD141J-103S	10K	¼W	Carbon	
	R601	QRD141J-103S	10K	¼W	Carbon	
	R602	QRD141J-103S	10K	¼W	Carbon	
	R603	QRD141J-222S	2.2K	¼W	Carbon	
	R604	QRD141J-222S	2.2K	¼W	Carbon	
	R605	QRD141J-222S	2.2K	¼W	Carbon	
	R606	QRD141J-222S	2.2K	¼W	Carbon	
	R607	QRD141S-222S	2.2K	¼W	Carbon	
	R608	QRD141J-222S	2.2K	¼W	Carbon	
	R609	QRD141J-222S	2.2K	¼W	Carbon	
	R610	QRD141J-222S	2.2K	¼W	Carbon	
	R611	QRD141J-222S	2.2K	¼W	Carbon	
	R612	QRD141J-222S	2.2K	¼W	Carbon	
	R613	QRD141J-222S	2.2K	¼W	Carbon	

Resistors

⚠	Item	Part Number	Description			Areas
	R614	QRD141J-222S	2.2K	¼W	Carbon	
	R615	QRD141J-222S	2.2K	¼W	Carbon	
	R616	QRD141J-222S	2.2K	¼W	Carbon	
	R617	QRD141J-222S	2.2K	¼W	Carbon	
	R618	QRD141J-222S	2.2K	¼W	Carbon	
	R619	QRD141J-221S	220	¼W	Carbon	
	R620	QRD141J-221S	220	¼W	Carbon	
	R621	QRD141J-221S	220	¼W	Carbon	
	R622	QRD141J-152S	1.5K	¼W	Carbon	
	R623	QRD141J-103S	10K	¼W	Carbon	
	R624	QRD141J-222S	2.2K	¼W	Carbon	
	R625	QRD141J-103S	10K	¼W	Carbon	
	R626	QRD141J-103S	10K	¼W	Carbon	
	R627	QRD141J-562S	5.6K	¼W	Carbon	
	R628	QRD141J-302S	3K	¼W	Carbon	
	R629	QRD141J-153S	15K	¼W	Carbon	
	R630	QRD141J-224S	220K	¼W	Carbon	
	R631	QRD141J-223S	22K	¼W	Carbon	
	R632	QRD141J-133S	13K	¼W	Carbon	
	R633	QRD141J-752S	7.5K	¼W	Carbon	
	R634	QRD141J-683S	68K	¼W	Carbon	
	R649	QRD141J-333S	33K	¼W	Carbon	
	R650	QRD141J-103S	10K	¼W	Carbon	
	R653	QRD141J-103S	10K	¼W	Carbon	
	R654	QRD141J-103S	10K	¼W	Carbon	
	R655	QRD141J-103S	10K	¼W	Carbon	
	R656	QRD141J-103S	10K	¼W	Carbon	
	R658	QRD141J-102S	1K	¼W	Carbon	
	R659	QRD141J-102S	1K	¼W	Carbon	
	R661	QRD141J-104S	110K	¼W	Carbon	
	R662	QRD141J-104S	110K	¼W	Carbon	
	R663	QRD141J-104S	110K	¼W	Carbon	
	R664	QRD141J-104S	110K	¼W	Carbon	
	R665	QRD141J-104S	110K	¼W	Carbon	
	R669	QRD141J-332S	3.3K	¼W	Carbon	
	R696	QRD141J-332S	3.3K	¼W	Carbon	
⚠	R697	QRD145J-8R2S	8.2	¼W	Unf. Carbon	
⚠	R698	QRD148J-475S	4.7K	¼W	Carbon	
	R823	QRD141J-102S	1K	¼W	Carbon	
⚠	R824	QRD145J-100S	10	¼W	Unf. Resistor	
	R825	QRD145J-151S	150	¼W	Unf. Carbon	
	R826	QRD141J-392S	3.9K	¼W	Carbon	

⚠: Safety Parts

Others

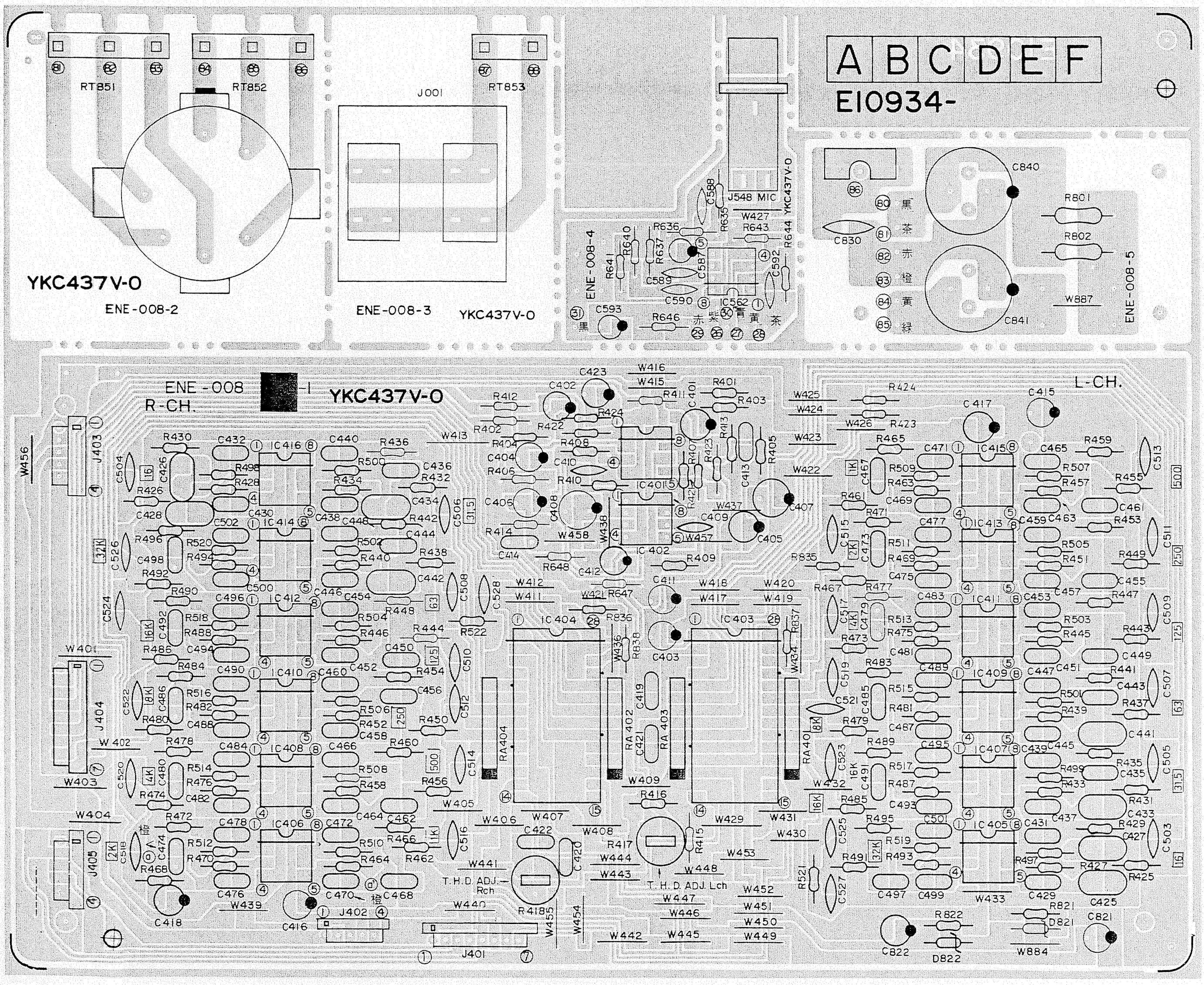
⚠	Item	Part Number	Description	Areas
	RA531	ERGS8XK-103	Res. Array	
	RA534	ERGS8XK-103	Res. Array	
	RA535	ERGS8XK-103	Res. Array	
	RA536	ERGS4XK-103	Res. Array	
	RA537	ERGS4XK-103	Res. Array	
	RA538	ERGS4YK-103	Res. Array	
	RA539	ERGS6YK-103	Res. Array	
	RA540	ERGS6YK-103	Res. Array	
	RA541	ERGS6YK-103	Res. Array	
	RA542	ERGS5YK-103	Res. Array	
	RA543	ERGS5XK-104	Res. Array	
	RT812	E67764-003	Terminal	
	XT531	ECX0006-000KU	Resonator	
		E10882-001	Circuit Board	
	J531	EMV7103-010A	Socket	
	J532	EMV7103-016A	Socket	
	J533	EMV7103-016A	Socket	
	J534	EMV7103-010A	Socket	
	J535	EMV7103-010A	Socket	
	J536	EMV7103-016A	Socket	
	J537	EMV7103-016A	Socket	
	J538	EMV7103-016A	Socket	
	J539	EMV7103-018A	Socket	
	J540	E04364-007A	7P Socket Assy	
	J541	E04364-008A	8P Socket Assy	
	J542	E04364-008A	8P Socket Assy	
	J543	E04364-008A	8P Socket Assy	
	J544	E04364-008A	8P Socket Assy	
	P545	QMV5005-003	3P Plug Assy	
	P546	QMV5005-006	6P Plug Assy	
	P547	QMV5005-004	4P Plug Assy	

3-(4) ENE-008☐ SEA Amp. P.C. Board Ass'y

Note: ENE-008☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENE-008 A	U.S.A. & Canada
ENE-008 B	U.S. Military Market & Other Countries
ENE-008 C	Europe, Australia & West Germany
ENE-008 DBS	U.K.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RT852
J001
RT853
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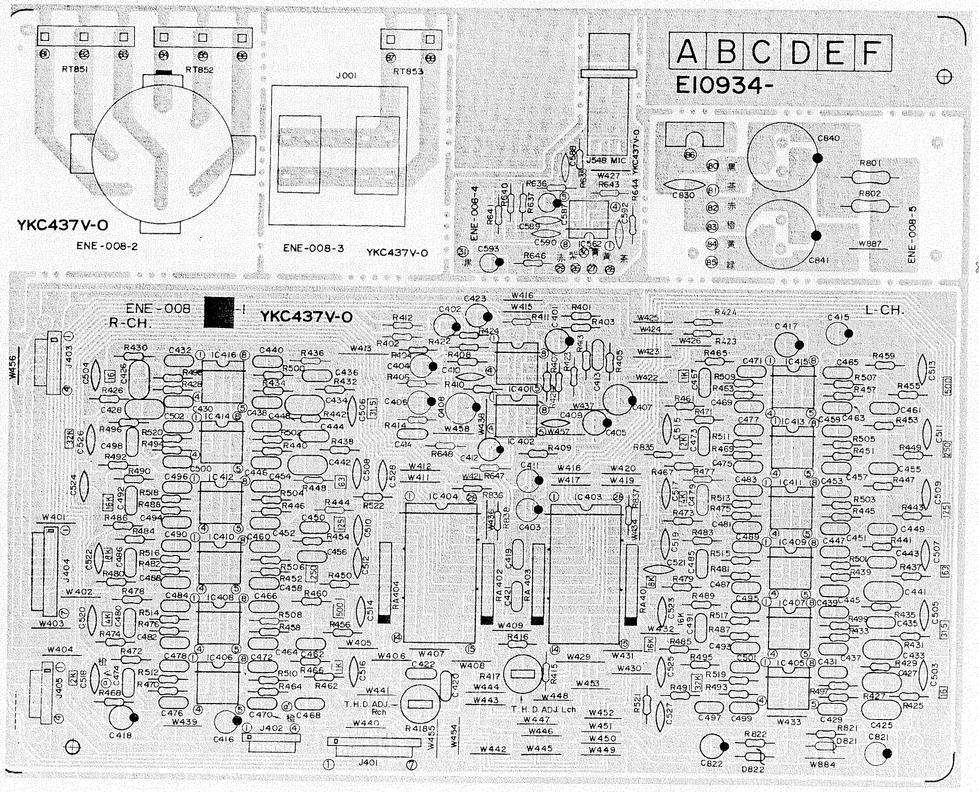
ENE-008-2
ENE-008-3
YKC437V-0
ENE-008-4
J548 MIC
YKC437V-0
ENE-008-5
C840
C841
C830
R801
R802
W887
ENE-008
YKC437V-0
R-CH.
L-CH.
IC401
IC402
IC403
IC404
IC405
IC406
IC407
IC408
IC409
IC410
IC411
IC412
IC413
IC414
IC415
IC416
J401
J402
J403
J404
J405
T.H.D. ADJ. Rch
T. H. D. ADJ. Lch
RA401
RA402
RA403
RA404
C821
C822
D821
D822
R821
R822
W884

3-(4) ENE-008☐ SEA Amp. P.C. Board Ass'y

Note: ENE-008☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Designated Areas
ENE-008 [A]	U.S.A. & Canada
ENE-008 [B]	U.S. Military Market & Other Countries
ENE-008 [C]	Europe, Australia & West Germany
ENE-008 [DBS]	U.K.



ICs

△	Item	Part Number	Description	Maker	Areas
	IC401	LM833N			
	IC402	LM833N			
	IC403	LM835N			
	IC404	LM835N			
	IC405	NJM4560D-X		Dainichi	
	IC406	NJM4560D-X		Dainichi	
	IC407	NJM4560D-X		Dainichi	
	IC408	NJM4560D-X		Dainichi	
	IC409	NJM4560D-X		Dainichi	
	IC410	NJM4560D-X		Dainichi	
	IC411	NJM4560D-X		Dainichi	
	IC412	NJM4560D-X		Dainichi	
	IC413	NJM4560D-X		Dainichi	
	IC414	NJM4560D-X		Dainichi	
	IC415	NJM4560D-X		Dainichi	
	IC416	NJM4560D-X		Dainichi	
	IC562	NJM4560D-X		Dainichi	

Diodes

△	Item	Part Number	Description	Maker	Areas
	D821	RD8.2EB3	Zener	NEC	
	D822	RD8.2EB3	Zener	NEC	

Capacitors

△	Item	Part Number	Description			Areas
	C401	QET61CM-226	22MF	16V	Electro	
	C402	QET61CM-226	22MF	16V	Electro	
	C403	QET61HM-225	2.2MF	50V	Electro	
	C404	QET61HM-225	2.2MF	50V	Electro	
	C405	QET61HM-475	4.7MF	50V	Electro	
	C406	QET61HM-475	4.7MF	50V	Electro	
	C407	QET61CM-226	22MF	16V	Electro	
	C408	QET61CM-226	22MF	16V	Electro	
	C409	QCS31HJ-7R0	7.0PF	50V	Ceramic	
	C410	QCS31HJ-7R0	7.0PF	50V	Ceramic	
	C411	QET61HM-225	2.2MF	50V	Electro	
	C412	QET61HM-225	2.2MF	50V	Electro	
	C413	QFV71HJ-102	1000PF	50V	T. Film	
	C414	QFV71HJ-102	1000PF	50V	T. Film	
	C415	QET61CM-107	100MF	16V	Electro	
	C416	QET61CM-476	47MF	16V	Electro	
	C417	QET61CM-107	100MF	16V	Electro	
	C418	QET61CM-476	47MF	16V	Electro	
	C419	QFP31HJ-331	330PF	50V	Ceramic	
	C420	QFP31HJ-331	330PF	50V	Ceramic	
	C421	QFP31HJ-331	330PF	50V	Ceramic	
	C422	QFP31HJ-331	330PF	50V	Ceramic	
	C423	QET61CM-226	22MF	16V	Electro	
	C425	QFV81HJ-105	1MF	50V	T. Film	
	C426	QFV31HJ-105	1MF	50V	T. Film	
	C427	QFV81HJ-684	0.68MF	50V	T. Film	
	C428	QFV81HJ-684	0.68MF	50V	T. Film	
	C429	QFV71HJ-224	0.22MF	50V	T. Film	
	C430	QFV71HJ-224	0.22MF	50V	T. Film	
	C431	QFV71HJ-472	4700PF	50V	T. Film	
	C432	QFV71HJ-472	4700PF	50V	T. Film	
	C433	QFV81HJ-824	0,82MF	50V	T. Film	
	C434	QFV81HJ-824	0.82MF	50V	T. Film	
	C435	QFV71HJ-393	0.039MF	50V	T. Film	
	C436	QFV71HJ-393	0.039MF	50V	T. Film	

Capacitors

△	Item	Part Number	Description			Areas
	C437	QFV71HJ-224	0.22MF	50V	T. Film	
	C438	QFV71HJ-224	0.22MF	50V	T. Film	
	C439	QFV71HJ-682	6800PF	50V	T. Film	
	C440	QFV71HJ-682	6800PF	50V	T. Film	
	C441	QFV81HJ-394	0.39MF	50V	T. Film	
	C442	QFV81HJ-394	0.39MF	50V	T. Film	
	C443	QFV71HJ-393	0.039MF	50V	T. Film	
	C444	QFV71HJ-393	0.039MF	50V	T. Film	
	C445	QFV71HJ-154	0.15MF	50V	T. Film	
	C446	QFV71HJ-154	0.15MF	50V	T. Film	
	C447	QFV71HJ-103	0.01MF	50V	T. Film	
	C448	QFV71HJ-103	0.01MF	50V	T. Film	
	C449	QFV71HJ-224	0.22MF	50V	T. Film	
	C450	QFV71HJ-224	0.22MF	50V	T. Film	
	C451	QFV71HJ-154	0.15MF	50V	T. Film	
	C452	QFV71HJ-154	0.15MF	50V	T. Film	
	C453	QFV71HJ-153	0.015MF	50V	T. Film	
	C454	QFV71HJ-153	0.015MF	50V	T. Film	
	C455	QFV71HJ-104	0.1MF	50V	T. Film	
	C456	QFV71HJ-104	0.1MF	50V	T. Film	
	C457	QFV71HJ-124	0.12MF	50V	T. Film	
	C458	QFV71HJ-124	0.12MF	50V	T. Film	
	C459	QFV71HJ-123	0.012MF	50V	T. Film	
	C460	QFV71HJ-123	0.012MF	50V	T. Film	
	C461	QFV71HJ-563	0.056MF	50V	T. Film	
	C462	QFV71HJ-563	0.056MF	50V	T. Film	
	C463	QFV71HJ-823	0.082MF	50V	T. Film	
	C464	QFV71HJ-823	0.082MF	50V	T. Film	
	C465	QFV71HJ-103	0.01MF	50V	T. Film	
	C466	QFV71HJ-103	0.01MF	50V	T. Film	
	C467	QFV71HJ-273	0.027MF	50V	T. Film	
	C468	QFV71HJ-273	0.027MF	50V	T. Film	
	C469	QFV71HJ-473	0.047MF	50V	T. Film	
	C470	QFV71HJ-473	0.047MF	50V	T. Film	
	C471	QFV71HJ-822	8200PF	50V	T. Film	
	C472	QFV71HJ-822	8200PF	50V	T. Film	
	C473	QFV71HJ-153	0.015MF	50V	T. Film	
	C474	QFV71HJ-153	0.015MF	50V	T. Film	
	C475	QFV71HJ-273	0.027MF	50V	T. Film	
	C476	QFV71HJ-273	0.027MF	50V.	T. Film	
	C477	QFV71HJ-562	5600PF	50V	T. Film	
	C478	QFV71HJ-562	5600PF	50V	T. Film	
	C479	QFV71HJ-682	6800PF	50V	T. Film	
	C480	QFV71HJ-682	6800PF	50V	T. Film	
	C481	QFV71HJ-153	0.015MF	50V	T. Film	
	C482	QFV71HJ-153	0.015MF	50V	T. Film	
	C483	QFV71HJ-272	2700PF	50V	T. Film	
	C484	QFV71HJ-272	2700PF	50V	T. Film	
	C485	QFV71HJ-332	3300PF	50V	T. Film	
	C486	QFV71HJ-332	3300PF	50V	T. Film	
	C487	QFV71HJ-682	6800PF	50V	T. Film	
	C488	QFV71HJ-682	6800PF	50V	T. Film	
	C489	QFP31HJ-821	820PF	50V	Ceramic	
	C490	QFP31HJ-821	820PF	50V	Ceramic	
	C491	QFV71HJ-182	1800PF	50V	T. Film	
	C492	QFV71HJ-182	1800PF	50V	T. Film	
	C493	QFV71HJ-332	3300PF	50V	T. Film	
	C494	QFV71HJ-332	3300PF	50V	T. Film	
	C495	QFP31HJ-391	390PF	50V	Ceramic	
	C496	QFP31HJ-391	390PF	50V	Ceramic	
	C497	QFP31HJ-821	820PF	50V	Ceramic	
	C498	QFP31HJ-821	820PF	50V	Ceramic	
	C499	QFV71HJ-152	1500PF	50V	T. Film	
	C500	QFV71HJ-152	1500PF	50V	T. Film	
	C501	QFP31HJ-181	180PF	50V	Ceramic	
	C502	QFP31HJ-181	180PF	50V	Ceramic	
	C503	QCS31HJ-120	12PF	50V	Ceramic	
	C504	QCS31HJ-120	12PF	50V	Ceramic	
	C505	QCS31HJ-120	12PF	50V	Ceramic	
	C506	QCS31HJ-120	12PF	50V	Ceramic	

apacitors

△	Item	Part Number	Description			Areas
	C507	QCS31HJ-120	12PF	50V	Ceramic	
	C508	QCS31HJ-120	12PF	50V	Ceramic	
	C509	QCS31HJ-120	12PF	50V	Ceramic	
	C510	QCS31HJ-120	12PF	50V	Ceramic	
	C511	QCS31HJ-120	12PF	50V	Ceramic	
	C512	QCS31HJ-120	12PF	50V	Ceramic	
	C513	QCS31HJ-120	12PF	50V	Ceramic	
	C154	QCS31HJ-120	12PF	50V	Ceramic	
	C515	QCS31HJ-120	12PF	50V	Ceramic	
	C516	QCS31HJ-120	12PF	50V	Ceramic	
	C517	QCS31HJ-120	12PF	50V	Ceramic	
	C518	QCS31HJ-120	12PF	50V	Ceramic	
	C519	QCS31HJ-120	12PF	50V	Ceramic	
	C520	QCS31HJ-120	12PF	50V	Ceramic	
	C521	QCS31HJ-120	12PF	50V	Ceramic	
	C522	QCS31HJ-120	12PF	50V	Ceramic	
	C523	QCS31HJ-120	12PF	50V	Ceramic	
	C524	QCS31HJ-120	12PF	50V	Ceramic	
	C525	QCS31HJ-120	12PF	50V	Ceramic	
	C526	QCS31HJ-120	12PF	50V	Ceramic	
	C527	QCS31HJ-560	56PF	50V	Ceramic	
	C528	QCS31HJ-560	56PF	50V	Ceramic	
	C587	QET61CM-226	22MF	16V	Electro	
	C588	QCS31HJ-101	100PF	50V	Ceramic	
	C589	QCS31HJ-220	22PF	50V	Ceramic	
	C590	QCS31HJ-221	220PF	50V	Ceramic	
	C592	QCS31HJ-330	33PF	50V	Ceramic	
	C593	QET61CM-476	47MF	16V	Electro	
	C821	QET61AM-227	220MF	10V	Electro	
	C822	QET61AM-227	220MF	10V	Electro	

esistors

△	Item	Part Number	Description			Areas
	R401	QRD141J-220S	22	¼W	Carbon	
	R402	QRD141J-220S	22	¼W	Carbon	
	R403	QRD141J-103S	10K	¼W	Carbon	
	R404	QRD141J-103S	10K	¼W	Carbon	
	R405	QRD141J-104S	100K	¼W	Carbon	
	R406	QRD141J-104S	100K	¼W	Carbon	
	R407	QRD141J-104S	100K	¼W	Carbon	
	R408	QRD141J-104S	100K	¼W	Carbon	
	R409	QRD141J-154S	150K	¼W	Carbon	
	R410	QRD141J-154S	150K	¼W	Carbon	
	R411	QRD141J-122S	1.2K	¼W	Carbon	
	R412	QRD141J-122S	1.2K	¼W	Carbon	
	R413	QRD141J-104S	100K	¼W	Carbon	
	R414	QRD141J-104S	100K	¼W	Carbon	
	R415	QRD141J-104S	100K	¼W	Carbon	
	R416	QRD141J-104S	100K	¼W	Carbon	
	R417	QVP4A0B-474	470K	0.1W	Variable	
	R418	QVP4A0B-474	470K	0.1W	Variable	
△	R419	QRD145J-120S	12	¼W	Unf. Carbon	
△	R420	QRD145J-120S	12	¼W	Unf. Carbon	
△	R423	QRD145J-470S	47	¼W	Unf. Carbon	A
△	R423	QRD145J-470S	47	¼W	Unf. Carbon	B
△	R423	QRD145J-470S	47	¼W	Unf. Carbon	C
△	R423	QRZ0062-470S	47	¼W	Fusible	DBS
△	R424	QRD145J-470S	47	¼W	Unf. Carbon	A
△	R424	QRD145J-470S	47	¼W	Unf. Carbon	B
△	R424	QRD145J-470S	47	¼W	Unf. Carbon	C
△	R424	QRZ0062-470S	47	¼W	Fusible	DBS
	R425	QRD141J-151S	150	¼W	Carbon	
	R426	QRD141J-151S	150	¼W	Carbon	
	R427	QRD141J-563S	56K	¼W	Carbon	
	R428	QRD141J-563S	56K	¼W	Carbon	
	R429	QRD141J-564S	560K	¼W	Carbon	
	R430	QRD141J-151S	150	¼W	Carbon	
	R431	QRD141J-151S	150	¼W	Carbon	

Resistors

△	Item	Part Number	Description			Areas
	R432	QRD141J-151S	150	¼W	Carbon	
	R433	QRD141J-273S	27K	¼W	Carbon	
	R434	QRD141J-273S	27K	¼W	Carbon	
	R435	QRD141J-274S	270K	¼W	Carbon	
	R436	QRD141J-274S	270K	¼W	Carbon	
	R437	QRD141J-121S	120	¼W	Carbon	
	R438	QRD141J-121S	120	¼W	Carbon	
	R439	QRD141J-103S	10K	¼W	Carbon	
	R440	QRD141J-103S	10K	¼W	Carbon	
	R441	QRD141J-204S	200K	¼W	Carbon	
	R442	QRD141J-204S	200K	¼W	Carbon	
	R443	QRD141J-680S	68	¼W	Carbon	
	R444	QRD141J-680S	68	¼W	Carbon	
	R445	QRD141J-562S	5.6K	¼W	Carbon	
	R446	QRD141J-562S	5.6K	¼W	Carbon	
	R447	QRD141J-104S	110K	¼W	Carbon	
	R448	QRD141J-104S	110K	¼W	Carbon	
	R449	QRD141J-470S	470	¼W	Carbon	
	R450	QRD141J-470S	470	¼W	Carbon	
	R451	QRD141J-512S	5.1K	¼W	Carbon	
	R452	QRD141J-512S	5.1K	¼W	Carbon	
	R453	QRD141J-683S	68K	¼W	Carbon	
	R454	QRD141J-683S	68K	¼W	Carbon	
	R455	QRD141J-121S	120	¼W	Carbon	
	R456	QRD141J-121S	120	¼W	Carbon	
	R457	QRD141J-472S	4.7K	¼W	Carbon	
	R458	QRD141J-472S	4.7K	¼W	Carbon	
	R459	QRD141J-433S	43K	¼W	Carbon	
	R460	QRD141J-433S	43K	¼W	Carbon	
	R461	QRD141J-151S	150	¼W	Carbon	
	R462	QRD141J-151S	150	¼W	Carbon	
	R463	QRD141J-332S	3.3K	¼W	Carbon	
	R464	QRD141J-332S	3.3K	¼W	Carbon	
	R465	QRD141J-393S	39K	¼W	Carbon	
	R466	QRD141J-393S	39K	¼W	Carbon	
	R467	QRD141J-121S	120	¼W	Carbon	
	R468	QRD141J-121S	120	¼W	Carbon	
	R469	QRD141J-272S	2.7K	¼W	Carbon	
	R470	QRD141J-272S	2.7K	¼W	Carbon	
	R471	QRD141J-333S	33K	¼W	Carbon	
	R472	QRD141J-333S	33K	¼W	Carbon	
	R473	QRD141J-470S	470	¼W	Carbon	
	R474	QRD141J-470S	470	¼W	Carbon	
	R475	QRD141J-272S	2.7K	¼W	Carbon	
	R476	QRD141J-272S	2.7K	¼W	Carbon	
	R477	QRD141J-303S	30K	¼W	Carbon	
	R478	QRD141J-303S	30K	¼W	Carbon	
	R479	QRD141J-470S	470	¼W	Carbon	
	R480	QRD141J-470S	470	¼W	Carbon	
	R481	QRD141J-472S	4.7K	¼W	Carbon	
	R482	QRD141J-472S	4.7K	¼W	Carbon	
	R483	QRD141J-333S	33K	¼W	Carbon	
	R484	QRD141J-333S	33K	¼W	Carbon	
	R485	QRD141J-470S	470	¼W	Carbon	
	R486	QRD141J-470S	470	¼W	Carbon	
	R487	QRD141J-392S	3.9K	¼W	Carbon	
	R488	QRD141J-392S	3.9K	¼W	Carbon	
	R489	QRD141J-303S	30K	¼W	Carbon	
	R490	QRD141J-303S	30K	¼W	Carbon	
	R491	QRD141J-470S	470	¼W	Carbon	
	R492	QRD141J-470S	470	¼W	Carbon	
	R493	QRD141J-562S	5.6K	¼W	Carbon	
	R494	QRD141J-562S	5.6K	¼W	Carbon	
	R495	QRD141J-333S	33K	¼W	Carbon	
	R496	QRD141J-333S	33K	¼W	Carbon	
	R497	QRD141J-471S	470	¼W	Carbon	
	R498	QRD141J-471S	470	¼W	Carbon	
	R499	QRD141J-471S	470	¼W	Carbon	
	R500	QRD141J-471S	470	¼W	Carbon	
	R501	QRD141J-471S	470	¼W	Carbon	

Resistors

△	Item	Part Number	Description			Areas
	R502	QRD141J-471S	470	¼W	Carbon	
	R503	QRD141J-471S	470	¼W	Carbon	
	R504	QRD141J-471S	470	¼W	Carbon	
	R505	QRD141J-471S	470	¼W	Carbon	
	R506	QRD141J-471S	470	¼W	Carbon	
	R507	QRD141J-471S	470	¼W	Carbon	
	R508	QRD141J-471S	470	¼W	Carbon	
	R509	QRD141J-471S	470	¼W	Carbon	
	R510	QRD141J-471S	470	¼W	Carbon	
	R511	QRD141J-471S	470	¼W	Carbon	
	R512	QRD141J-471S	470	¼W	Carbon	
	R513	QRD141J-471S	470	¼W	Carbon	
	R514	QRD141J-471S	470	¼W	Carbon	
	R515	QRD141J-471S	470	¼W	Carbon	
	R516	QRD141J-471S	470	¼W	Carbon	
	R517	QRD141J-471S	470	¼W	Carbon	
	R518	QRD141J-471S	470	¼W	Carbon	
	R519	QRD141J-471S	470	¼W	Carbon	
	R520	QRD141J-471S	470	¼W	Carbon	
	R521	QRD141J-104S	110K	¼W	Carbon	
	R522	QRD141J-104S	110K	¼W	Carbon	
	R635	QRD141J-104S	110K	¼W	Carbon	
	R636	QRD141J-101S	100	¼W	Carbon	
	R637	QRD141J-103S	10K	¼W	Carbon	
	R638	QRD141J-182S	1.8K	¼W	Carbon	
	R639	QRD141J-103S	10K	¼W	Carbon	
	R640	QRD141J-121S	120	¼W	Carbon	
	R641	QRD141J-682S	6.8K	¼W	Carbon	
	R643	QRD141J-103S	10K	¼W	Carbon	
	R644	QRD141J-473S	47K	¼W	Carbon	
	R646	QRD141J-101S	100	¼W	Carbon	
	R647	QRD141J-274S	270K	¼W	Carbon	
	R648	QRD141J-274S	270K	¼W	Carbon	
	R821	QRD141J-102S	1K	¼W	Carbon	
	R822	QRD141J-102S	1K	¼W	Carbon	

△: Safety Parts

Others

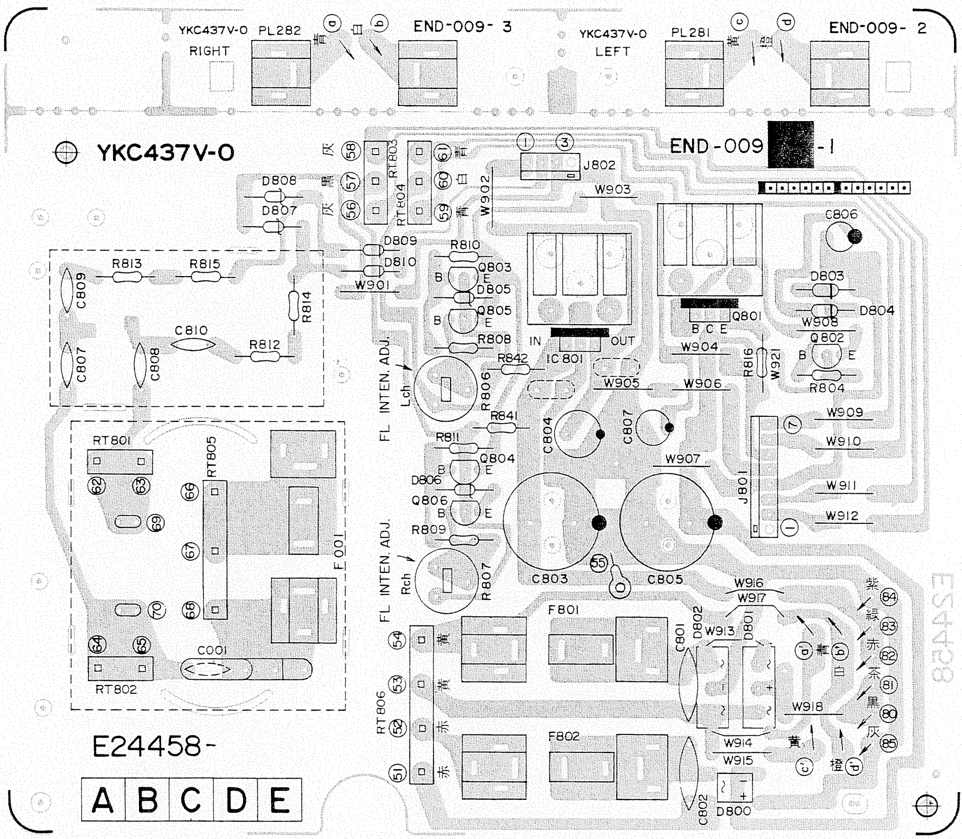
△	Item	Part Number	Description	Areas
		E10934-001	Circuit Board	A
		E10934-001	Circuit Board	B
		E10934-001	Circuit Board	C
		E10934-001BS	Circuit Board	DBS
	J001	QMC0437-002	AC Socket	A
	J001	QMC0437-002	AC Socket	B
	J401	E04365-007	F.W. Socket	
	J402	E04365-004	Jamper Socket	
	J403	E04365-004	Jamper Socket	
	J404	E04365-007	F.W. Socket	
	J405	E04365-004	Jamper Socket	
	J546	EWS016-069	SKT Wire Assy	
	J548	QMS6302-126	Mic Jack	
	RT851	E67764-303	R. Terminal	B
	RT851	E67764-303	R. Terminal	C
	RT851	E67764-303	R. Terminal	DBS
	RT852	E67764-303	R. Terminal	B
	RT852	E67764-303	R. Terminal	C
	RT852	E67764-303	R. Terminal	DBS
	RT853	E67764-302	R. Terminal	
		QSR0085-001U	Voltage Selector	B
		QSR0085-001U	Voltage Selector	C
		QSR0085-001UBS	Voltage Selector	DBS
	RA401	ERGS7XK-474	Resistor Array	
	RA402	ERGS7XK-474	Resistor Array	
	RA403	ERGS7XK-474	Resistor Array	
	RA404	ERGS7XK-474	Resistor Array	

3-(5) END-009☐ Power Supply P.C. Board Ass'y

Note: END-009☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Designated Areas
END-009 B	U.S.A. & Canada
END-009 C	U.S. Military Market & Other Countries
END-009 D	Europe, Australia & West Germany
END-009 E	U.K.



YKC437V-O PL282 RIGHT
END-009- 3
YKC437V-O LEFT PL281
END-009- 2
YKC437V-O
END-009 -1
J802
W903
W902
RT803
RT804
D808
D807
D809
D810
W901
R810
Q803
D805
Q805
R808
R842
IC801
IN
OUT
Q801
B C E
D803
D804
W908
Q802
W904
R816
W921
W905
W906
R804
C806
R813
R815
R814
C809
C810
R812
C807
C808
RT801
RT805
RT802
C001
F001
FL INTEN. ADJ. Lch
FL INTEN. ADJ. Rch
R806
R841
R811
Q804
D806
Q806
R809
R807
C804
C807
W907
J801
W909
W910
W911
W912
C803
C805
F801
F802
W916
W917
W913
D802
D801
C801
W918
W914
W915
C802
D800
RT806
E24458-
A B C D E

Transistors

△	Item	Part Number	Description	Description	Areas
				Maker	
	Q801	2SB507V(E)	Silicon	Sanyo	
	Q802	2SA872AV(D,E)	Silicon	Hitachi	
	Q803	2SC2235(O,Y)	Silicon	Toshiba	
	Q804	2SC2235(O,Y)	Silicon	Toshiba	
	Q805	2SC2240(GR,BL)	Silicon	Toshiba	
	Q806	2SC2240(GR,BL)	Silicon	Toshiba	

ICs

△	Item	Part Number	Description	Description	Areas
				Maker	
	IC801	L7805		Sanyo	

Diodes

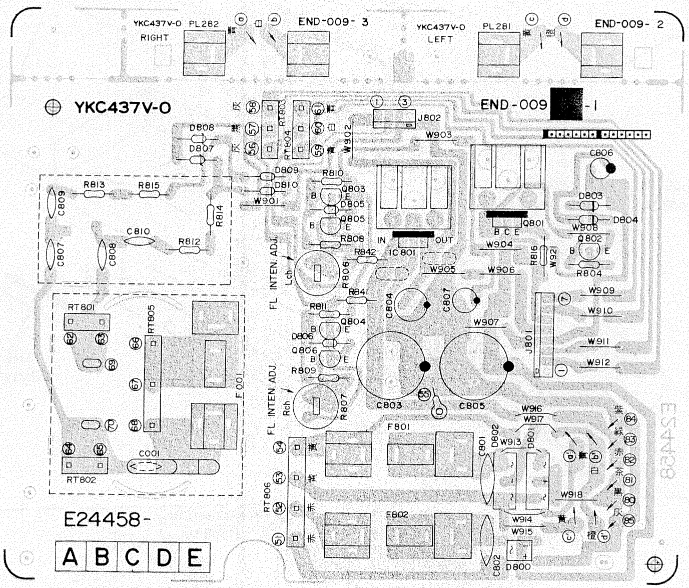
△	Item	Part Number	Description	Description	Areas
				Maker	
	D800	1D4B42	Silicon	Toshiba	
	D801	1D2C1(LC2)	Silicon	Toshiba	
	D802	1D2Z1(LC2)	Silicon	Toshiba	
	D803	RD15EB3	Zener	NEC	
	D804	RD22EB3	Silicon	NEC	
	D805	RD6.8EB3	Silicon	NEC	
	D806	RD6.8EB3	Silicon	NEC	
	D807	RD5.6EB3	Zener	NEC	
	D808	RD5.6EB3	Zener	NEC	
	D809	1S2076-31	Silicon	Hitachi	
	D810	1S2076-31	Silicon	Hitachi	

3-(5) END-009☐ Power Supply P.C. Board Ass'y

Note: END-009☐ varies according to the areas employed. See note (1) when placing on order.

Note (1)

P.C. Board Ass'y	Designated Areas
END-009 B	U.S.A. & Canada
END-009 C	U.S. Military Market & Other Countries
END-009 D	Europe, Australia & West Germany
END-009 E	U.K.


YKC437V-O RIGHT
PL282
END-009- 3
YKC437V-O LEFT
PL281
END-009- 2
⊕ YKC437V-O
END-009 -I
J802
W903
C806
D808
D807
D809
D810
R810
Q803
Q805
W901
R813
R815
R814
C809
C810
R812
C807
C808
D803
D804
Q801
W808
Q802
B C E
R808
R842
IC801
IN
OUT
W904
W905
W906
R816
W921
R804
FL INTEN. ADJ. Lch
R806
R841
C804
C807
W909
W910
W907
RT801
RT805
R811
Q804
D806
Q806
R809
J801
W911
W912
F001
FL INTEN. ADJ. Rch
R807
C803
C805
W916
W917
F801
C801
D802
W913
D801
RT802
C001
RT806
W918
E24458-
A B C D E
F802
W914
W915
C802
D800
8344S3

ransistors

⚠	Item	Part Number	Description		Areas
				Maker	
	Q801	2SB507V(E)	Silicon	Sanyo	
	Q802	2SA872AV(D,E)	Silicon	Hitachi	
	Q803	2SC2235(O,Y)	Silicon	Toshiba	
	Q804	2SC2235(O,Y)	Silicon	Toshiba	
	Q805	2SC2240(GR,BL)	Silicon	Toshiba	
	Q806	2SC2240(GR,BL)	Silicon	Toshiba	

Cs

⚠	Item	Part Number	Description		Areas
				Maker	
	IC801	L7805		Sanyo	

Diodes

⚠	Item	Part Number	Description		Areas
				Maker	
	D800	1D4B42	Silicon	Toshiba	
	D801	1D2C1(LC2)	Silicon	Toshiba	
	D802	1D2Z1(LC2)	Silicon	Toshiba	
	D803	RD15EB3	Zener	NEC	
	D804	RD22EB3	Silicon	NEC	
	D805	RD6.8EB3	Silicon	NEC	
	D806	RD6.8EB3	Silicon	NEC	
	D807	RD5.6EB3	Zener	NEC	
	D808	RD5.6EB3	Zener	NEC	
	D809	1S2076-31	Silicon	Hitachi	
	D810	1S2076-31	Silicon	Hitachi	

Capacitors

⚠	Item	Part Number	Description			Areas
	C001	QFZ9020-103	0.01MF		Mylar	D
	C001	QFZ9020-103BS	0.01MF		Mylar	EBS
	C001	QCZ9018-103	0.01MF		Ceramic	C
	C001	QCZ9019-103	0.01MF		Ceramic	B
	C800	QET61HM-476	47MF	50V	Electro	
	C801	QCE22HP-103	0.01UF	500V	Ceramic	
	C802	QCE22HP-103	0.01UF	500V	Ceramic	
	C803	QET51CM-4781	4700MF	16V	Electro	
	C804	QET51AM-477	470MF	10V	Electro	
	C805	QET51JM-477	470MF	63V	Electro	
	C806	QET51HM-476	47UF	50V	Electro	
	C807	QCZ9019-222A	2200PF		Ceramic	B
	C807	QCZ9019-222A	2200PF		Ceramic	C
	C807	QCZ9019-222A	2200PF		Ceramic	D
	C807	QCZ9019-222ABS	2200PF		Ceramic	EBS
	C808	QCZ9019-222A	2200PF		Ceramic	B
	C808	QCZ9019-222A	2200PF		Ceramic	C
	C808	QCZ9019-222A	2200PF		Ceramic	D
	C808	QCZ9019-222ABS	2200PF		Ceramic	EBS
	C809	QCZ9019-222A	2200PF		Ceramic	B
	C809	QCZ9019-222A	2200PF		Ceramic	C
	C809	QCZ9019-222A	2200PF		Ceramic	D
	C809	QCZ9019-222ABS	2200PF		Ceramic	EBS
	C810	QCZ9019-222A	2200PF		Ceramic	B
	C810	QCZ9019-222A	2200PF		Ceramic	C
	C810	QCZ9019-222A	2200PF		Ceramic	D
	C810	QCZ9019-222ABS	2200PF		Ceramic	EBS
	C840	QET41CM-478	4700MF	16V	Electro	
	C841	QET41CM-478	4700MF	16V	Electro	

Resistors

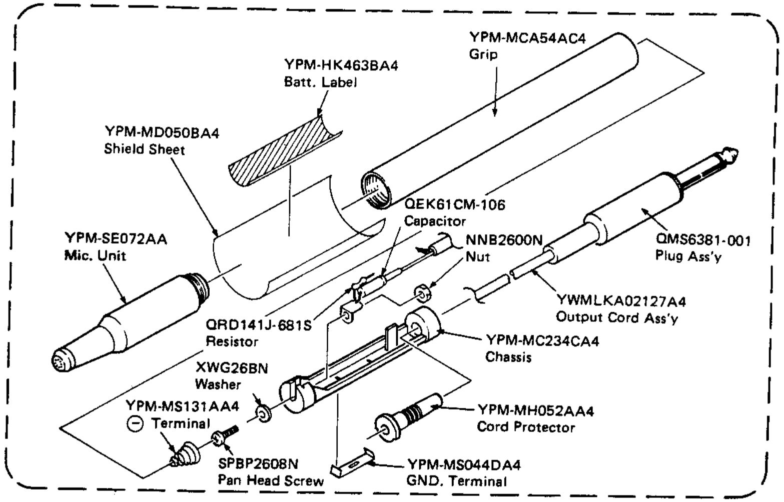
⚠	Item	Part Number	Description			Areas
⚠	R801	QRX022J-2R2A	2.2	2W	M. Film	
⚠	R802	QRX022J-2R2A	2.2	2W	M. Film	
	R804	QRD141J-223S	22K	¼W	Carbon	
	R806	QVP4A0B-103	10K	0.1W	Variable	
	R807	QVP4A0B-103	10K	0.1W	Variable	
	R808	QRD141J-822S	8.2K	¼W	Carbon	
	R809	QRD141J-822S	8.2K	¼W	Carbon	
	R810	QRD141J-121S	120	¼W	Carbon	
	R811	QRD141J-121S	120	¼W	Carbon	
	R812	QRD141J-105S	1M	¼W	Carbon	
	R813	QRD141J-105S	1M	¼W	Carbon	
	R814	QRD141J-105S	1M	¼W	Carbon	
	R815	QRD141J-105S	1M	¼W	Carbon	
⚠	R816	QRD145J-120S	12	¼W	Unf. Carbon	B
	R841	QRD141J-473S	47K	¼W	Carbon	
	R842	QRD141J-473S	47K	¼W	Carbon	

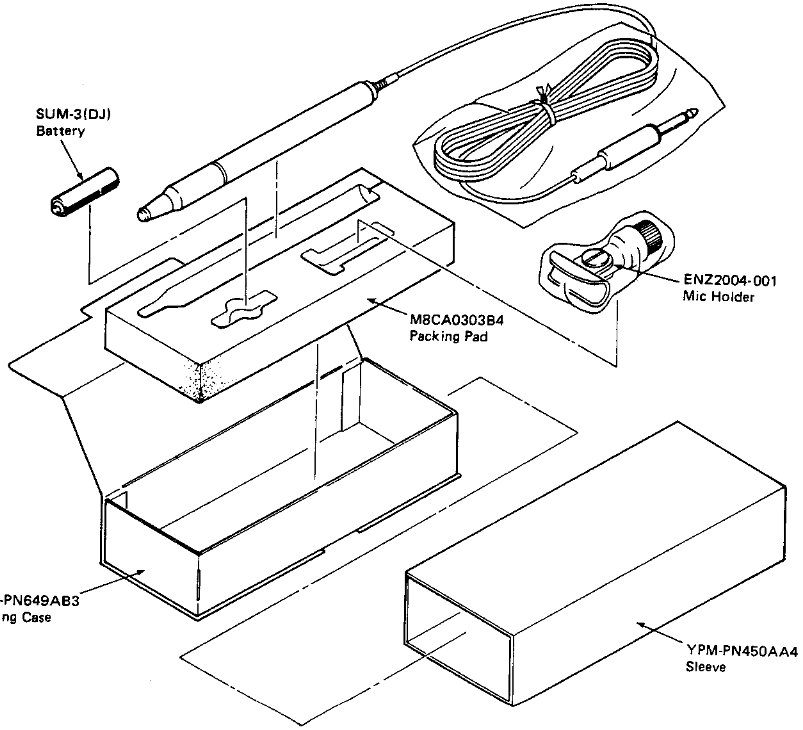
⚠: Safety Parts

Others

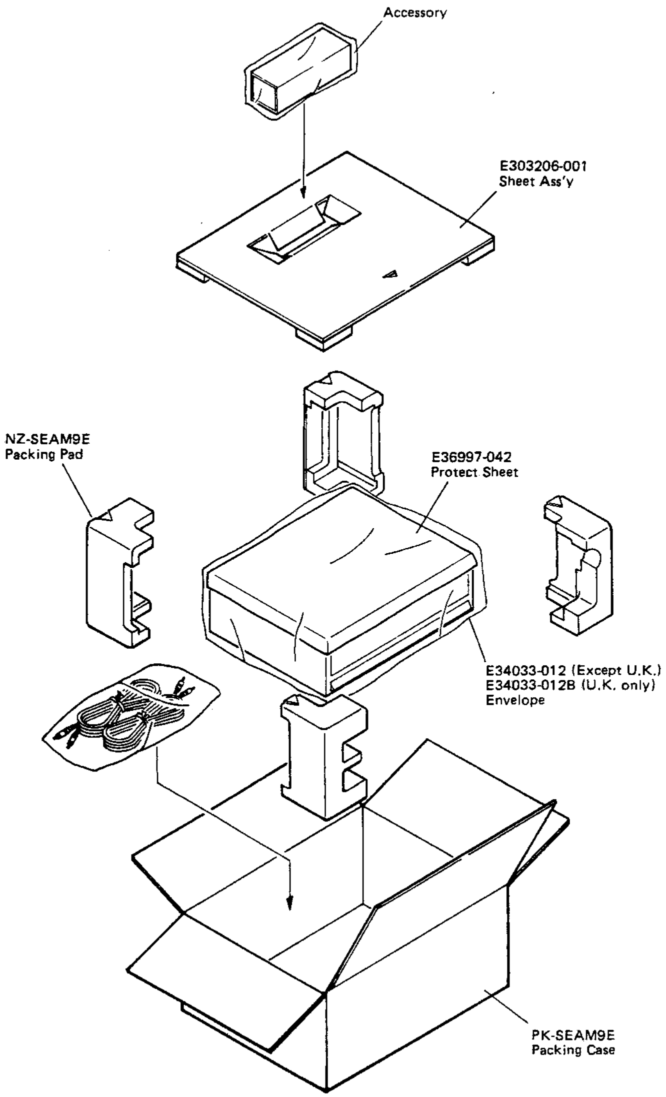
⚠	Item	Part Number	Description	Areas
	RT804	E67764-003	Terminal	
	RT805	E67764-203	Terminal Assy	
	RT806	E67764-104	Terminal	
		E24458-001	Circuit Board	B
		E24458-001	Circuit Board	C
		E24458-001	Circuit Board	D
		E24458-001BS	Circuit Board	EBS
		E70945-H25B	Heat Sink	
		E70945-H35B	Heat Sink	
		E45524-002	Fuse Clip	B
		E45524-002	Fuse Clip	
		E45524-002	Fuse Clip	
		EMG7331-001	Fuse Clip	C
		EMG7331-001	Fuse Clip	D
		EMG7331-001	Fuse Clip	EBS
		SBSB3008M	Screw	
	RT801	E67764-102	Terminal Assy	
	RT802	E67764-102	Terminal Assy	
	RT803	E67764-003	Terminal	
	J801	E04365-007	F.W. Socket	
	J802	E04365-003	3P Socket	

4. Accessory Microphone


YPM-MCA54AC4
Grip
YPM-HK463BA4
Batt. Label
YPM-MD050BA4
Shield Sheet
QEK61CM-106
Capacitor
YPM-SE072AA
Mic. Unit
NNB2600N
Nut
QMS6381-001
Plug Ass'y
YWMLKA02127A4
Output Cord Ass'y
QRD141J-681S
Resistor
YPM-MC234CA4
Chassis
XWG26BN
Washer
YPM-MS131AA4
⊖ Terminal
YPM-MH052AA4
Cord Protector
SPBP2608N
Pan Head Screw
YPM-MS044DA4
GND. Terminal


SUM-3(DJ)
Battery
ENZ2004-001
Mic Holder
M8CA0303B4
Packing Pad
YPM-PN649AB3
Packing Case
YPM-PN450AA4
Sleeve

5. Packing Materials and Part Numbers


Accessory
E303206-001
Sheet Ass'y
NZ-SEAM9E
Packing Pad
E36997-042
Protect Sheet
E34033-012 (Except U.K.)
E34033-012B (U.K. only)
Envelope
PK-SEAM9E
Packing Case

6. Accessories List

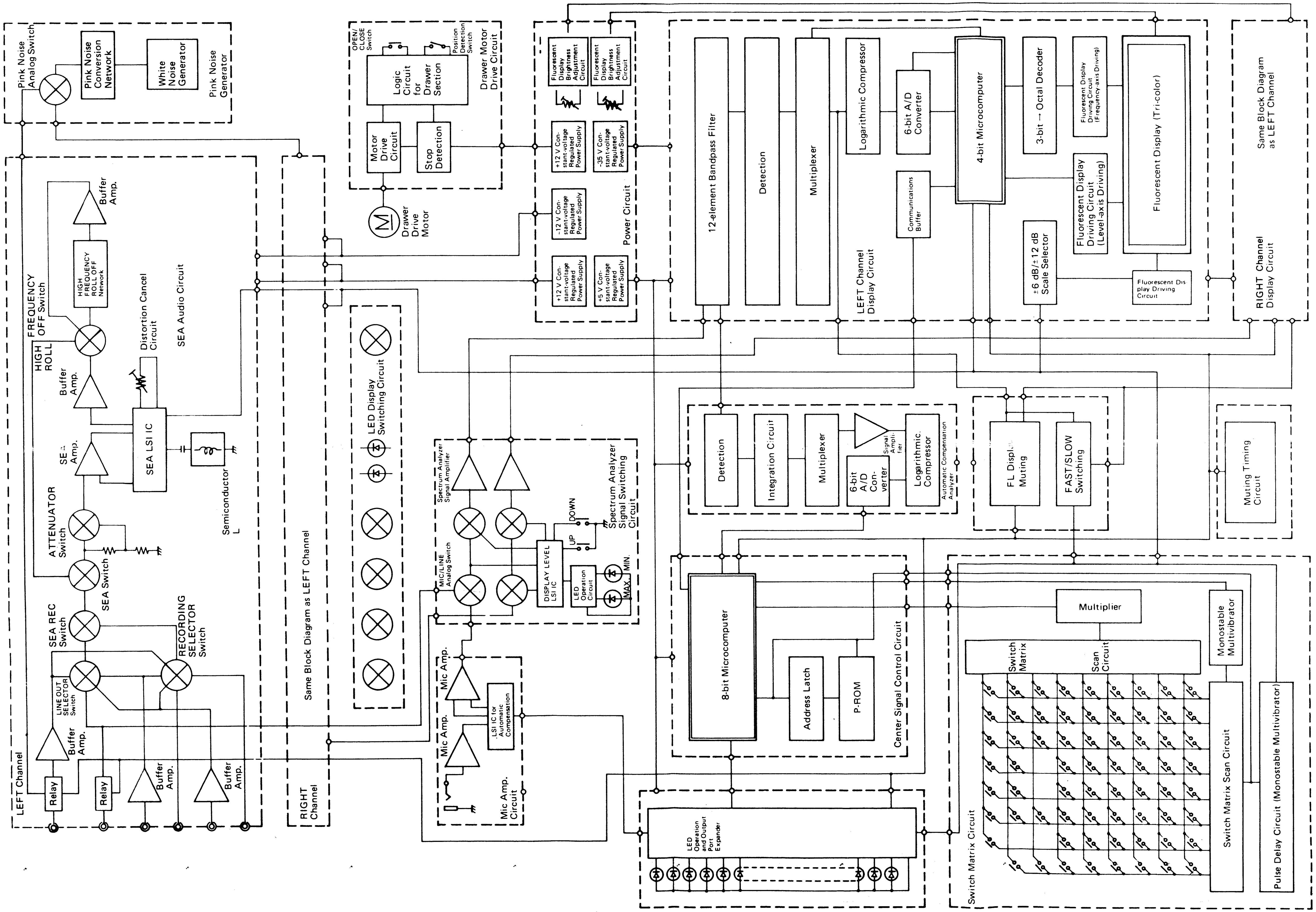
⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1150A	Instruction Book	1		Except J
	E30580-1150ABS	Instruction Book	1		BS only
	BT20048	Warranty Card	1		J, P, PG
	BT20025E	Warranty Card	1		C
	BT20064	Warranty Card	1		G
	BT20029C	Warranty Card	1		A
	BT20060	Warranty Card	1		BS
	ENZ2003-002	Mic Ass'y	1		
	ENZ2004-001	Holder Ass'y	1		
	SUM-3(DJ)	Battery	1		
	BT20046A	Service Information Card	1		J, P, PG
	BT20044D	Safety Instruction Sheet	1		J
	BT20071	Service Center List	1		C
	BT20066	EEC Agency	1		G, BS
	BT20054-006A	FTZ Information	1		G
	E66416-003	Envelope	1		J
	E60932-007	Caution Sheet	1	220V	U, PG, E, G
	E60932-005	Caution Sheet	1	110V	P
	E60932-008	Caution Sheet	1	240V	BS
⚠	E04056	Siemens Plug	1		U, PG

⚠ : Safety Parts

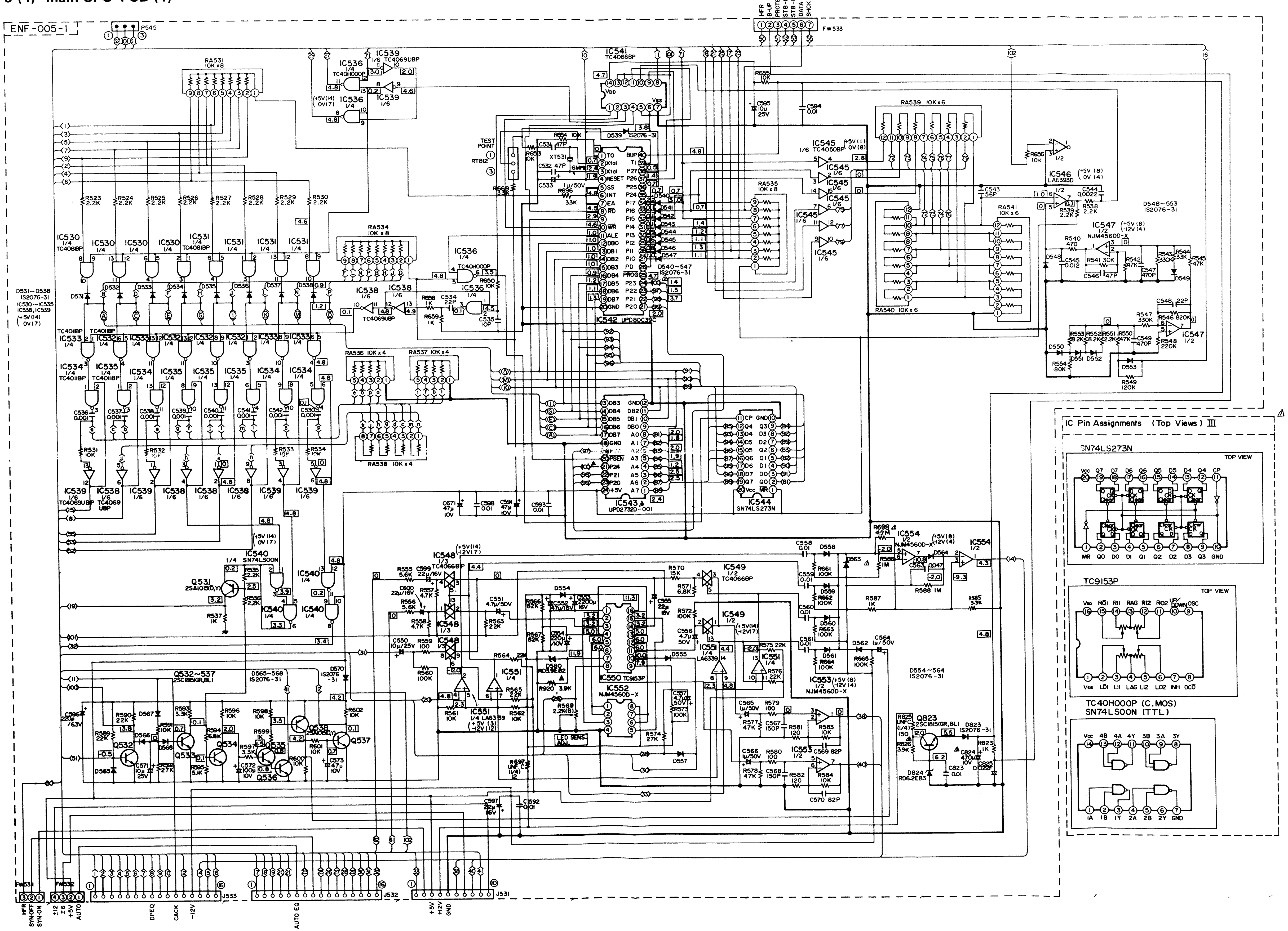
The Marks for Designated Areas.

J . . . . U.S.A.
C . . . . Canada
E . . . . Europe
G . . . . West Germany
A . . . . Australia
P, PG . . . . U.S. Military Market
BS . . . . U.K.
U . . . . Other Countries

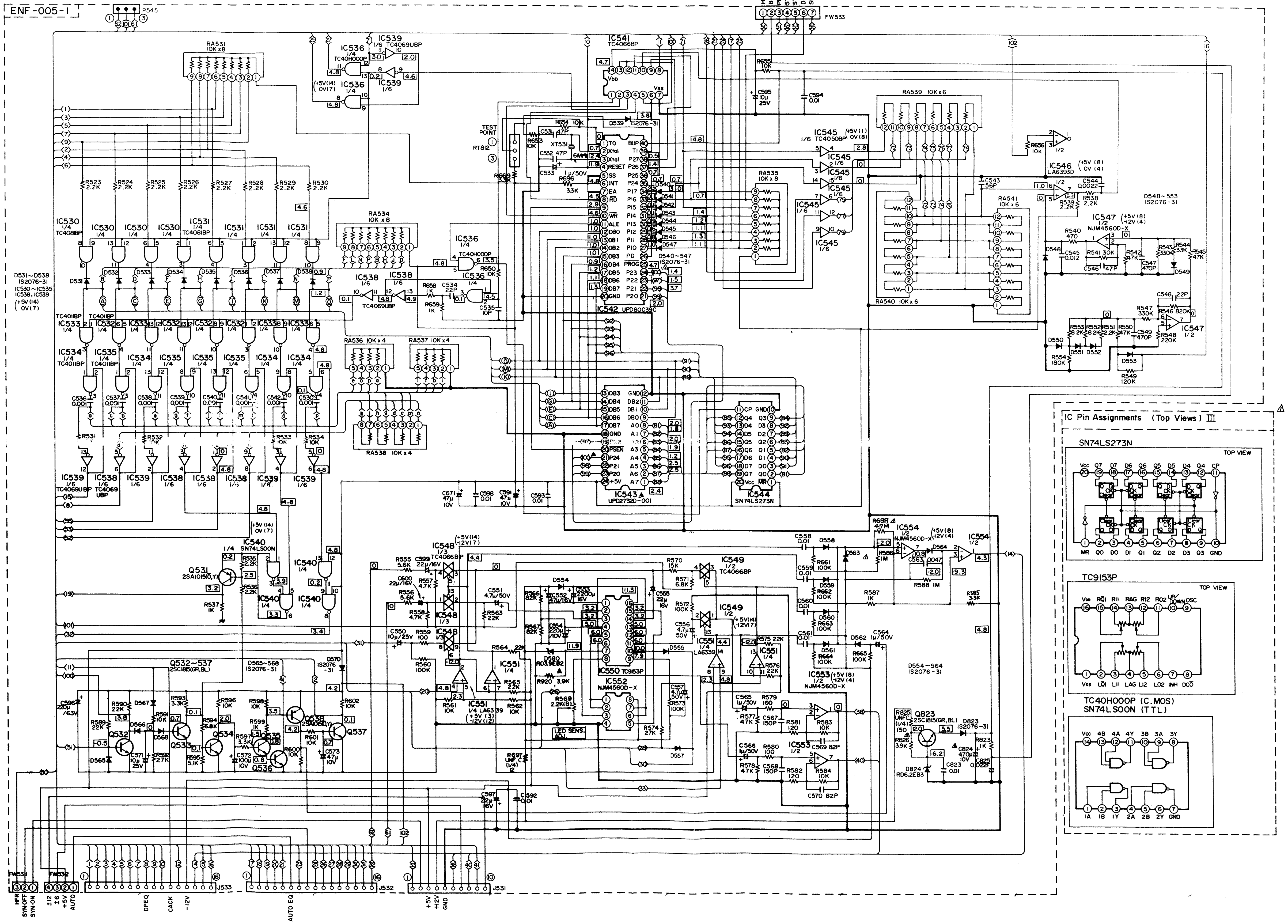
8. Block Diagram


Pink Noise Analog Switch
Pink Noise Conversion Network
White Noise Generator
Pink Noise Generator
OPEN/CLOSE Switch
Logic Circuit for Drawer Section
Position Detection Switch
Drawer Motor Drive Circuit
Motor Drive Circuit
Stop Detection
Drawer Drive Motor
Fluorescent Display Brightness Adjustment Circuit
+12 V Constant-voltage Regulated Power Supply
-35 V Constant-voltage Regulated Power Supply
-12 V Constant-voltage Regulated Power Supply
+5 V Constant-voltage Regulated Power Supply
Power Circuit
12-element Bandpass Filter
Detection
Multiplexer
Logarithmic Compressor
6-bit A/D Converter
Communications Buffer
4-bit Microcomputer
3-bit → Octal Decoder
Fluorescent Display Driving Circuit (Frequency axis Driving)
Fluorescent Display Driving Circuit (Level-axis Driving)
Fluorescent Display (Tri-color)
±6 dB/±12 dB Scale Selector
Fluorescent Display Driving Circuit
LEFT Channel Display Circuit
Same Block Diagram as LEFT Channel
RIGHT Channel Display Circuit
Buffer Amp.
HIGH FREQUENCY ROLL OFF Network
HIGH FREQUENCY ROLL OFF Switch
Distortion Cancel Circuit
SEA Audio Circuit
SEA Amp.
SEA LSI IC
Semiconductor L
ATTENUATOR Switch
SEA Switch
SEA REC Switch
RECORDING SELECTOR Switch
LINE OUT SELECTOR Switch
Relay
LEFT Channel
Same Block Diagram as LEFT Channel
RIGHT Channel
LED Display Switching Circuit
Spectrum Analyzer Signal Amplifier
MIC/LINE Analog Switch
DISPLAY LEVEL LSI IC
LED Operation Circuit
UP
DOWN
MAX.
MIN.
Spectrum Analyzer Signal Switching Circuit
Mic Amp.
LSI IC for Automatic Compensation
Mic Amp. Circuit
Integration Circuit
Signal Amplifier
6-bit A/D Converter
Logarithmic Compressor
Automatic Compensation Analyzer
FL Display Muting
FAST/SLOW Switching
Muting Timing Circuit
8-bit Microcomputer
Address Latch
P-ROM
Center Signal Control Circuit
Multiplier
Monostable Multivibrator
Switch Matrix
Scan Circuit
Switch Matrix Scan Circuit
Pulse Delay Circuit (Monostable Multivibrator)
Switch Matrix Circuit
LED Operation and Output Port Expander

9-(4) Main CPU PCB (1)

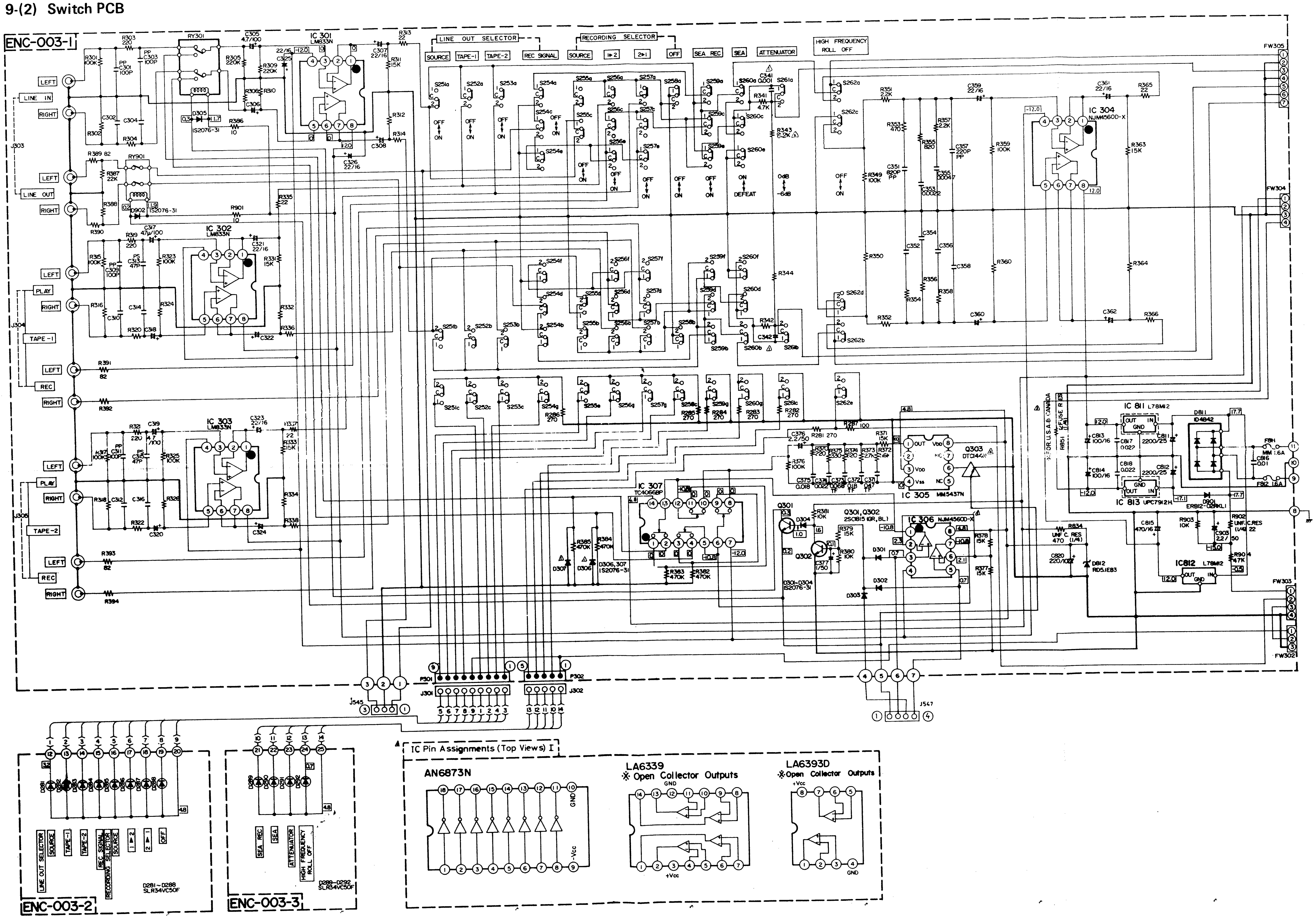

ENF-005-1
P545
FW533
HFR
B-UP
PROTECT
STB-R
STB-L
DATA
SHCK
IC541 TC40668P
IC542 UPD80C35C
IC543 UPD2732D-001
IC544 SN74LS273N
IC545 1/6 TC4050BP
IC546 LA6393D
IC547 1/2 NJM4560D-X
IC548 1/3 TC4066BP
IC549 1/2 TC4066BP
IC550 TC9153P
IC551 1/4 LA6339
IC552 NJM4560D-X
IC553 1/2 NJM4560D-X
IC554 1/2 NJM4560D-X
IC530 1/4 TC4081BP
IC531 1/4 TC4081BP
IC533 1/4 TC4011BP
IC534 1/4 TC4011BP
IC535 1/4 TC4011BP
IC536 1/4 TC40H000P
IC538 1/6 TC4069UBP
IC539 1/6 TC4069UBP
IC540 1/4 SN74LS00N
RA531 10K x 8
RA534 10K x 8
RA535 10K x 8
RA536 10K x 4
RA537 10K x 4
RA538 10K x 4
RA539 10K x 6
RA540 10K x 6
RA541 10K x 6
XT531
TEST POINT
RT812
Q531 2SA1015(O,Y)
Q532~537 2SC1815(GR,BL)
Q823 2SC1815(GR,BL)
D531~D538 1S2076-31
D539 1S2076-31
D540~547 1S2076-31
D548~553 1S2076-31
D554~564 1S2076-31
D565~568 1S2076-31
D823 1S2076-31
D824 RD6.2EB3
LED SENS.
LINE ADJ
IC Pin Assignments (Top Views) III
SN74LS273N
TOP VIEW
Vcc Q7 D7 D6 Q6 Q5 D5 D4 Q4 CP
MR Q0 D0 D1 Q1 Q2 D2 D3 Q3 GND
TC9153P
TOP VIEW
Vss LDI LI1 LAG LI2 LOE INH DCO
TC40H000P (C.MOS)
SN74LS00N (TTL)
Vcc 4B 4A 4Y 3B 3A 3Y
1A 1B 1Y 2A 2B 2Y GND
FW531
FW532
J533
J532
J531
HFR
SYN-OFF
SYN-ON
±12
±6
+5V
AUTO
DPEQ
CACK
-12V
AUTO EQ
+5V
+12V
GND

9-(4) Main CPU PCB (1)


ENF-005-1
P545
FW533
HFR
B-UP
PROTECT
STB-R
STB-L
DATA
SHCK
RA531 10K x 8
IC536 1/4 TC40H000P
IC539 1/6 TC4069UBP
IC541 TC4066BP
RA539 10K x 6
IC545 1/6 TC4050BP
IC546 LA6393D
IC547 1/2 NJM4560D-X
D548~553 1S2076-31
TEST POINT
RT812
XT531 6MHz
D539 1S2076-31
IC542 UPD80C39C
RA535 10K x 8
D540~547 1S2076-31
RA541 10K x 6
RA540 10K x 6
IC530 1/4 TC4081BP
IC531 1/4 TC4081BP
D531~D538 1S2076-31
IC530~IC535 IC538, IC539 (+5V (14) 0V (7))
RA534 10K x 8
IC538 1/6 TC4069UBP
IC533 1/4 TC4011BP
IC532 1/4 TC4011BP
IC534 1/4 TC4011BP
IC535 1/4 TC4011BP
RA536 10K x 4
RA537 10K x 4
RA538 10K x 4
IC543 UPD2732D-001
IC544 SN74LS273N
IC539 1/6 TC4069UBP
IC538 1/6 TC4069UBP
IC540 1/4 SN74LS00N
Q531 2SA1015(O,Y)
IC548 1/3 TC4066BP
IC549 1/2 TC4066BP
IC550 TC9153P
IC551 1/4 LA6339
IC552 NJM4560D-X
IC553 1/2 NJM4560D-X
IC554 1/2 NJM4560D-X
LED SENS. ADJ.
Q532~537 2SC1815(GR,BL)
D565~568 1S2076-31
D570 1S2076-31
Q538 2SA1015(Y)
Q823 2SC1815(GR,BL)
D823 1S2076-31
D824 RD6.2EB3
D554~564 1S2076-31
IC Pin Assignments (Top Views) III
SN74LS273N
TOP VIEW
Vcc Q7 D7 D6 Q6 Q5 D5 D4 Q4 CP
MR Q0 D0 D1 Q1 Q2 D2 D3 Q3 GND
TC9153P
TOP VIEW
Vss RQI RI1 RAG RI2 RO2 UP/DOWN OSC
Vss LDI LI1 LAG LI2 LO2 INH DCO
TC40H000P (C.MOS)
SN74LS00N (TTL)
Vcc 4B 4A 4Y 3B 3A 3Y
1A 1B 1Y 2A 2B 2Y GND
FW531
HFR
SYN-OFF
SYN-ON
FW532
±12
±5
+5V
AUTO
J533
DPEQ
CACK
-12V
J532
AUTO EQ
J531
+5V
+12V
GND

SEA-M9B

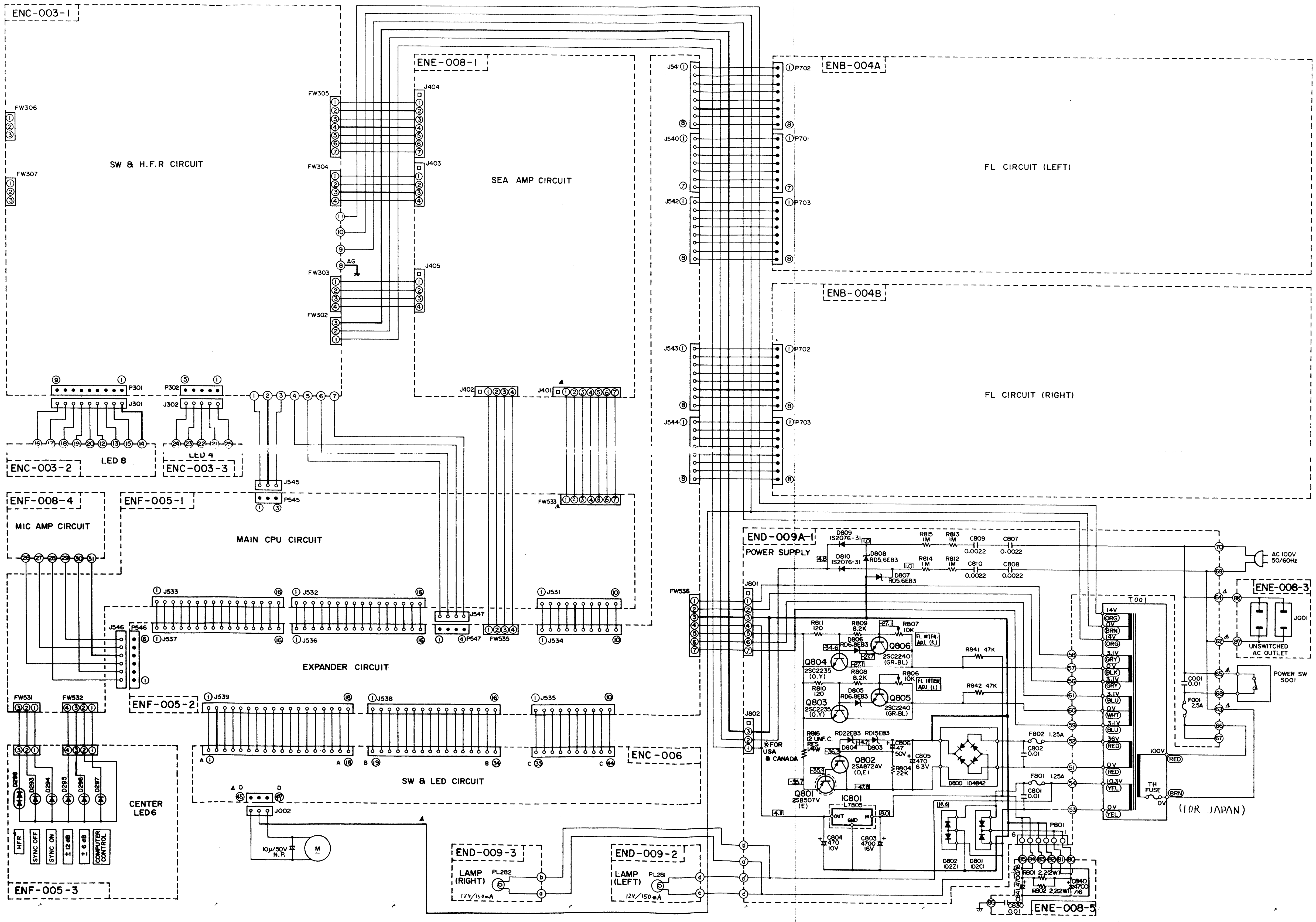
9-(2) Switch PCB


ENC-003-1
LINE IN
LEFT
RIGHT
LINE OUT
PLAY
TAPE-1
TAPE-2
REC
J303
J304
J305
RY301
RY901
IC 301 LM833N
IC 302 LM833N
IC 303 LM833N
IC 304 NJM4560D-X
IC 305 MM5437N
IC 306 NJM4560D-X
IC 307 TC4066BP
IC 811 L78M12
IC 812 L78M12
IC 813 UPC7912H
D811 1D4842
Q301,Q302 2SC1815 (GR,BL)
Q303 DTC144W
D301~D304 1S2076-31
D306,307 1S2076-31
D305 1S2076-31
D902 1S2076-31
D812 RD5.1EB3
D901 ERB12-02RKL1
LINE OUT SELECTOR
SOURCE
RECORDING SELECTOR
REC SIGNAL
SEA REC
SEA
ATTENUATOR
HIGH FREQUENCY ROLL OFF
OFF
ON
DEFEAT
0dB
-6dB
FW302
FW303
FW304
FW305
F811 1.6A
F812 1.6A
P301
P302
J301
J302
J545
J547
ENC-003-2
ENC-003-3
D281~D288 SLR34VC50F
D289~D292 SLR34VC50F
IC Pin Assignments (Top Views) I
AN6873N
LA6339
※ Open Collector Outputs
LA6393D
※Open Collector Outputs
GND
+Vcc
-Vcc

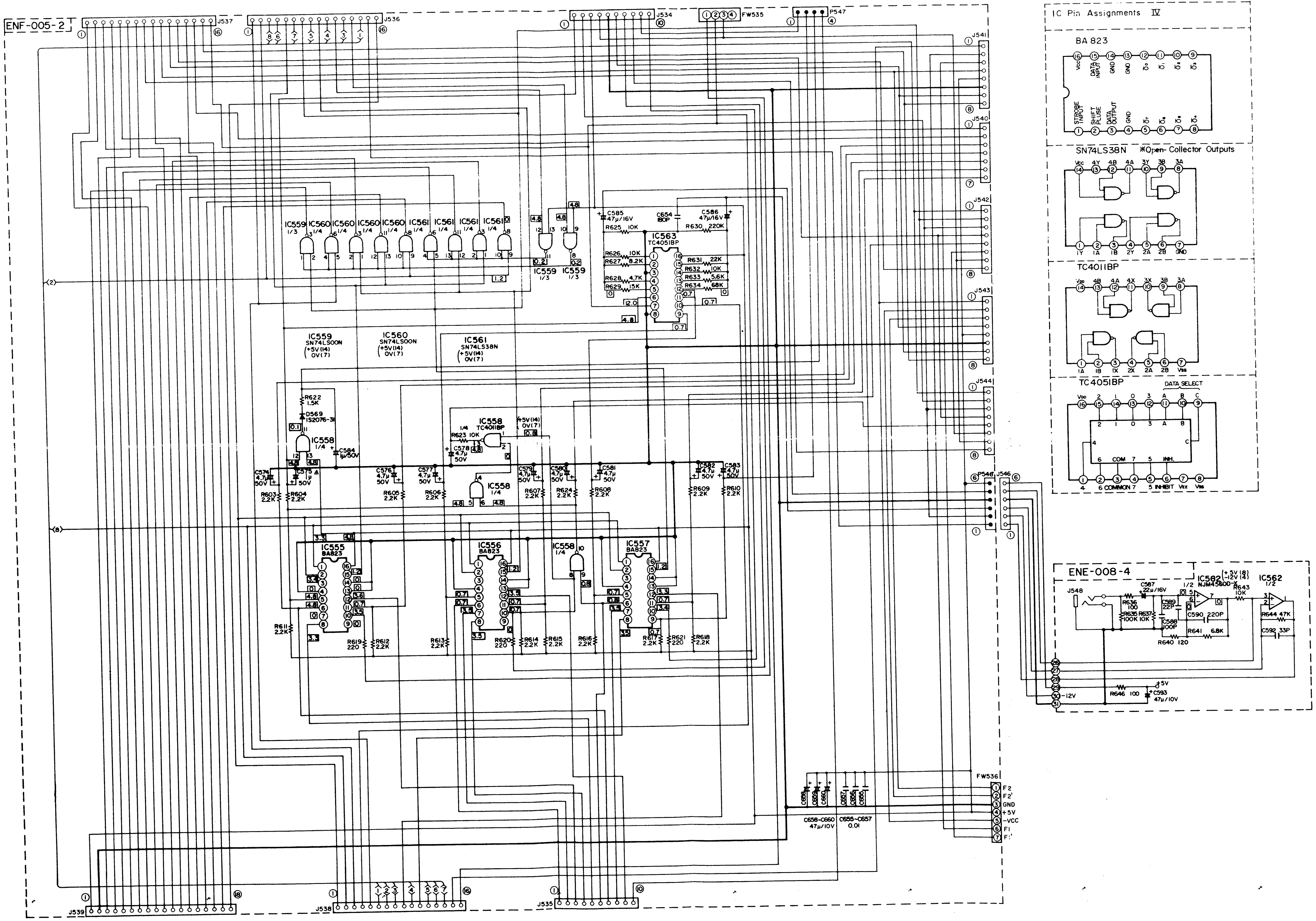
(No. 2745)

9. Schematic Diagram

9-(1) Overall Connection Diagram


ENC-003-1
SW & H.F.R CIRCUIT
FW305
FW304
FW303
FW302
FW306
FW307
AG
P301
J301
P302
J302
LED 8
LED 4
ENC-003-2
ENC-003-3
ENE-008-1
SEA AMP CIRCUIT
J404
J403
J405
J402
J401
J541
J540
J542
J543
J544
P702
P701
P703
ENB-004A
FL CIRCUIT (LEFT)
ENB-004B
FL CIRCUIT (RIGHT)
J545
P545
ENF-008-4
MIC AMP CIRCUIT
ENF-005-1
MAIN CPU CIRCUIT
FW533
J533
J532
J531
J546
P546
J537
J536
J547
P547
FW535
J534
EXPANDER CIRCUIT
FW531
FW532
ENF-005-2
J539
J538
J535
ENC-006
SW & LED CIRCUIT
J002
10μ/50V N.P.
M
CENTER LED6
HFR
SYNC OFF
SYNC ON
±12dB
±6dB
COMPUTER CONTROL
ENF-005-3
END-009-3
LAMP (RIGHT)
PL282
12V/150mA
END-009-2
LAMP (LEFT)
PL281
12V/150mA
FW536
END-009A-1
POWER SUPPLY
J801
J802
D809 1S2076-31
D810 1S2076-31
D808 RD5.6EB3
D807 RD5.6EB3
R815 1M
R813 1M
R814 1M
R812 1M
C809 0.0022
C807 0.0022
C810 0.0022
C808 0.0022
R811 120
R809 8.2K
R807 10K
D806 RD6.8EB3
Q806 2SC2240 (GR.BL)
FL INTEN. ADJ. (R)
Q804 2SC2235 (O.Y)
R841 47K
R810 120
R808 8.2K
R806 10K
FL INTEN. ADJ. (L)
D805 RD6.8EB3
Q805 2SC2240 (GR.BL)
Q803 2SC2235 (O.Y)
R842 47K
R816 12 UNF.C.
RCS 1/4W
※FOR USA & CANADA
RD22EB3
RD15EB3
D804
D803
Q802 2SA872AV (D,E)
C806 47 50V
C805 470 63V
R804 22K
Q801 2SB507V (E)
IC801 L7805
OUT GND IN
C804 470 10V
C803 4700 16V
D800 10D4B42
F802 1.25A
C802 0.01
F801 1.25A
C801 0.01
D802 10Z21
D801 10Z21
P801
R801 2.2 1/2W
R802 2.2 1/2W
C840 4700 16
C841 0.01
ENE-008-5
T001
14V
ORG
0V
BRN
ORG
3.1V
GRY
BLK
BLU
WHT
36V
RED
10.3V
YEL
100V
TH FUSE
(10R JAPAN)
AC 100V 50/60Hz
ENE-008-3
J001
UNSWITCHED AC OUTLET
POWER SW S001
C001 0.01
F001 2.5A

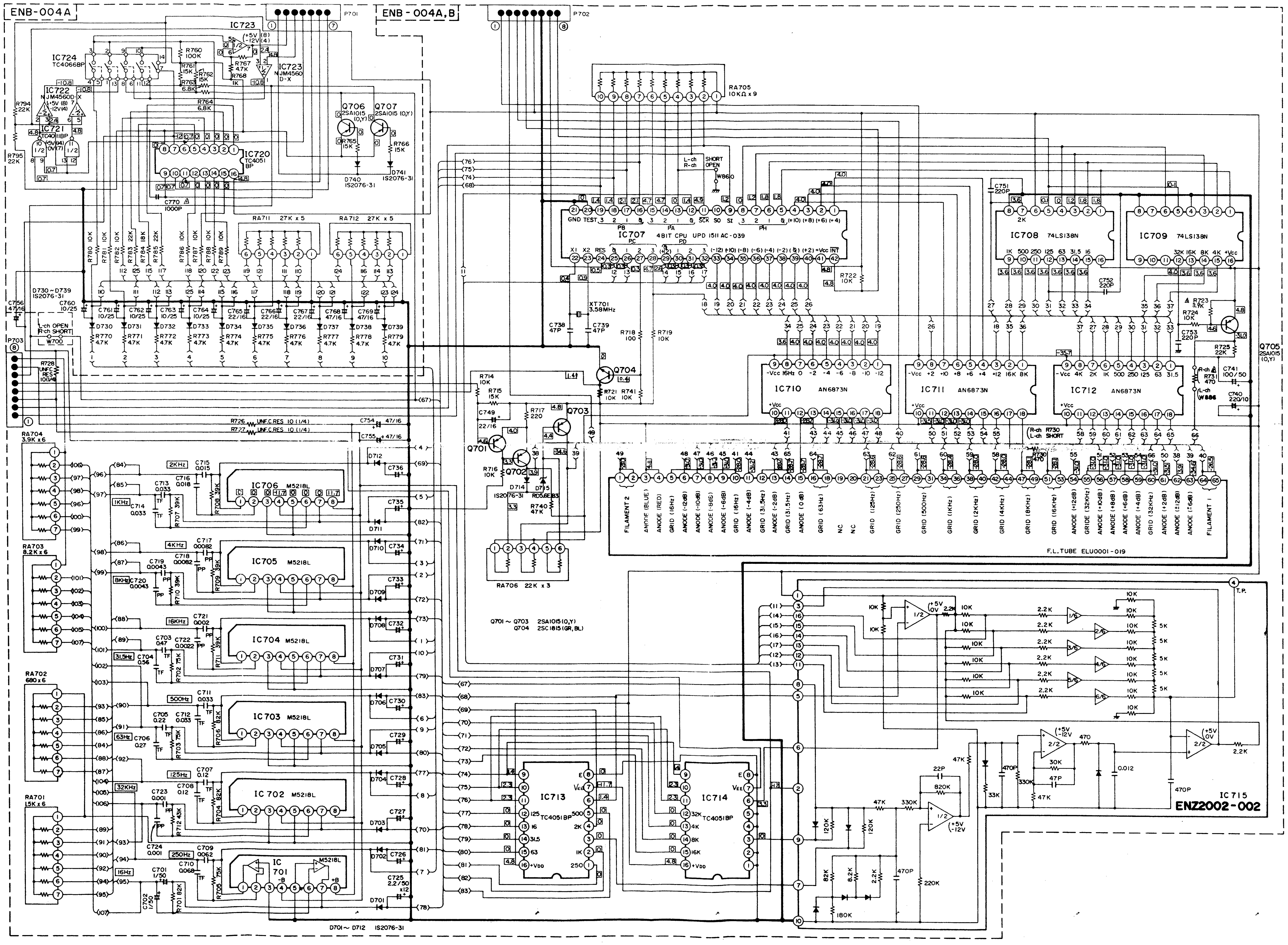
9-(5) Main CPU PCB (2)



ENF-005-2
J537
J536
J534
FW535
P547
J541
J540
J542
J543
J544
P546
J546
J539
J538
J535
FW536
F2
F2'
GND
+5V
-VCC
F1
F1'
IC559 1/3
IC560 1/4
IC561 1/4
IC559 SN74LS00N (+5V(14) 0V(7))
IC560 SN74LS00N (+5V(14) 0V(7))
IC561 SN74LS38N (+5V(14) 0V(7))
IC563 TC4051BP
IC558 1/4 TC4011BP
IC555 BA823
IC556 BA823
IC557 BA823
D569 1S2076-31
R622 1.5K
R623 10K
R625 10K
R626 10K
R627 8.2K
R628 4.7K
R629 15K
R630 220K
R631 22K
R632 10K
R633 5.6K
R634 68K
R603 2.2K
R604 2.2K
R605 2.2K
R606 2.2K
R607 2.2K
R608 2.2K
R609 2.2K
R610 2.2K
R624 2.2K
R611 2.2K
R612 2.2K
R613 2.2K
R614 2.2K
R615 2.2K
R616 2.2K
R617 2.2K
R618 2.2K
R619 220
R620 220
R621 220
C585 47μ/16V
C586 47μ/16V
C654 180P
C574 4.7μ 50V
C575 1μ 50V
C576 4.7μ 50V
C577 4.7μ 50V
C578 4.7μ 50V
C579 4.7μ 50V
C580 4.7μ 50V
C581 4.7μ 50V
C582 4.7μ 50V
C583 4.7μ 50V
C584 1μ/50V
C658-C660 47μ/10V
C655-C657 0.01
IC Pin Assignments Ⅳ
BA 823
Vcc DATA INPUT GND GND Ō₁ Ō₂ Ō₃ Ō₄
STROBE INPUT SHIFT PLUSE DATA OUTPUT GND Ō₅ Ō₆ Ō₇ Ō₈
SN74LS38N ※Open-Collector Outputs
Vcc 4Y 4B 4A 3Y 3B 3A
1Y 1A 1B 2Y 2A 2B GND
TC4011BP
VDD 4B 4A 4X 3X 3B 3A
1A 1B 1X 2X 2A 2B Vss
TC4051BP
DATA SELECT
VDD 2 1 0 3 A B C
4 6 COMMON 7 5 INHIBIT VEE Vss
ENE-008-4
J548
IC562 NJM4560D-D 1/2 (+5V(8) -12V(4))
IC562 1/2
C587 22μ/16V
R636 100
R635 100K
R637 10K
C589 22P
C588 100P
C590 220P
R643 10K
R641 6.8K
R640 120
R644 47K
C592 33P
R646 100
C593 47μ/10V
+5V
-12V

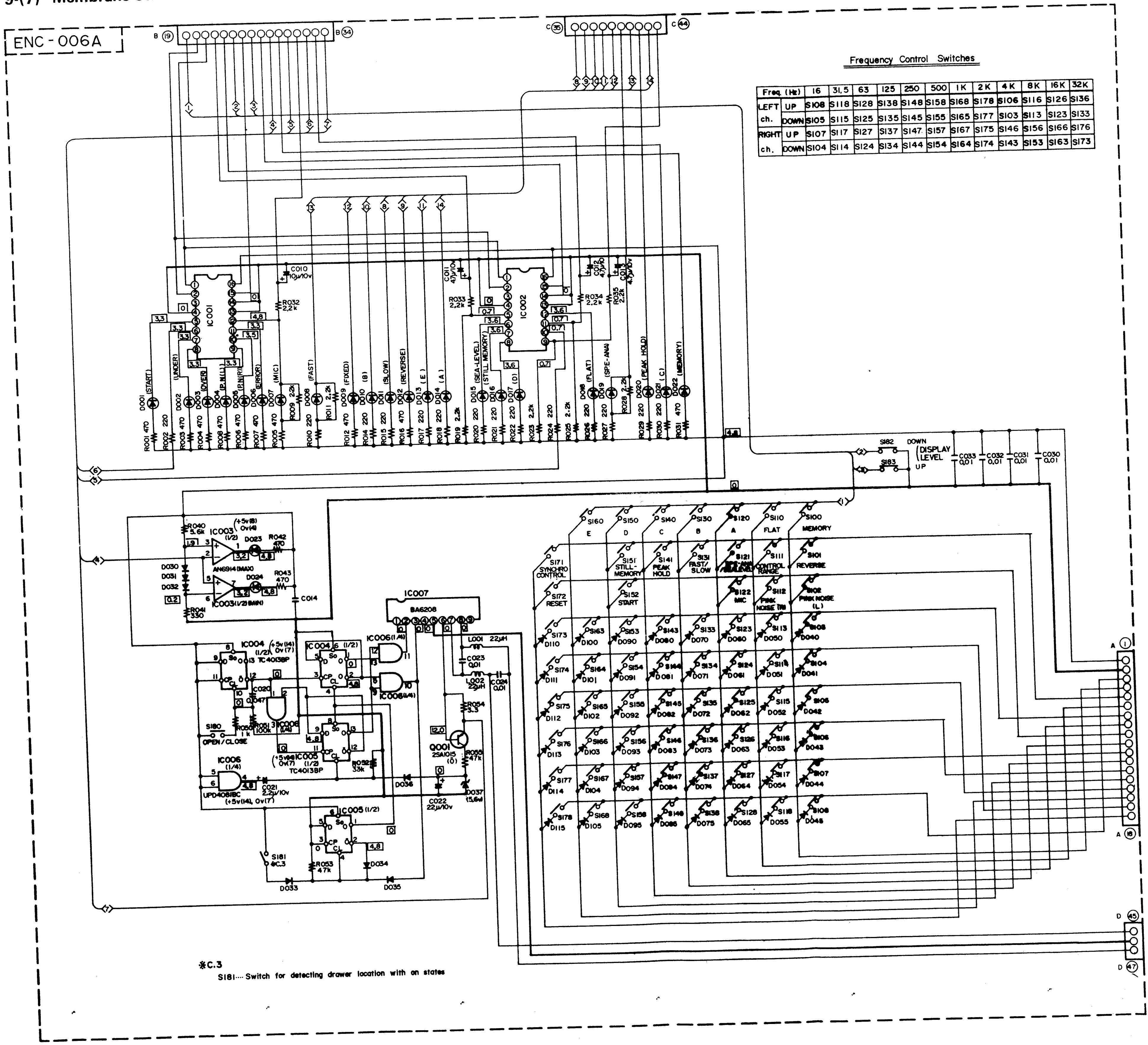
SEA-M9B

9-(6) FL PCB


ENB-004A
ENB-004A,B
P701
P702
P703
IC720 TC4051BP
IC721 TC4011BP
IC722 NJM4560D·X
IC723 NJM4560D·X
IC724 TC4066BP
Q706 2SA1015(O,Y)
Q707 2SA1015(O,Y)
RA705 10KΩ x 9
RA711 27K x 5
RA712 27K x 5
IC707 4BIT CPU UPD 1511 AC-039
IC708 74LS138N
IC709 74LS138N
IC710 AN6873N
IC711 AN6873N
IC712 AN6873N
Q701
Q702
Q703
Q704
Q705 2SA1015 (O,Y)
XT701 3.58MHz
RA706 22K x 3
Q701 ~ Q703 2SA1015(O,Y)
Q704 2SC1815(GR,BL)
D730~D739 1S2076-31
L-ch OPEN R-ch SHORT W700
L-ch R-ch SHORT OPEN W860
R728 UNFC RES 10(1/4)
R726 UNFC RES 10 (1/4)
R727 UNFC RES 10 (1/4)
RA704 3.9K x 6
RA703 8.2K x 6
RA702 680 x 6
RA701 15K x 6
IC706 M5218L
IC705 M5218L
IC704 M5218L
IC703 M5218L
IC702 M5218L
IC 701 M5218L
2KHz
1KHz
4KHz
8KHz
16KHz
31.5Hz
500Hz
63Hz
125Hz
32KHz
250Hz
16Hz
IC713 TC4051BP
IC714 TC4051BP
D701~D712 1S2076-31
F.L.TUBE ELU0001-019
FILAMENT 2
ANODE (BLUE)
ANODE (RED)
FILAMENT 1
T.P.
IC715
ENZ2002-002

(No. 2745)

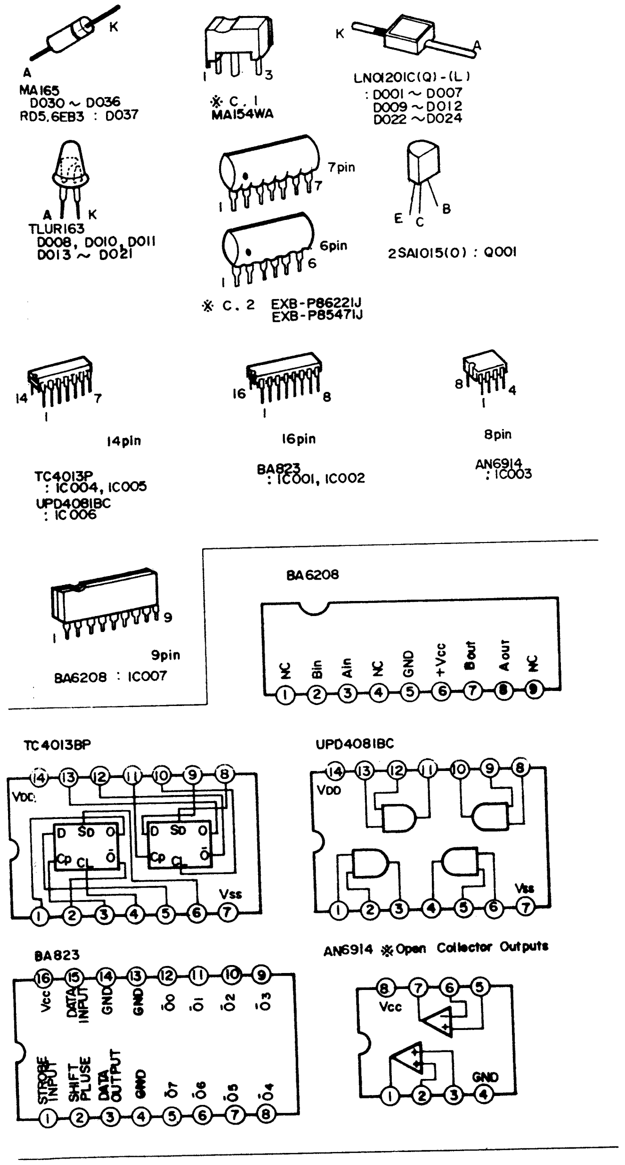
9-(7) Membrane Switch PCB


ENC-006A
IC001
IC002
IC003 AN6914
IC004 TC4013BP
IC005
IC006 UPD4081BC
IC007 BA6208
Q001 2SA1015
S182 DOWN (DISPLAY LEVEL UP
S183
S160 E
S150 D
S140 C
S130 B
S120 A
S110 FLAT
S100 MEMORY
S171 SYNCHRO CONTROL
S151 STILL-MEMORY
S141 PEAK HOLD
S131 FAST/SLOW
S111 CONTROL RANGE
S101 REVERSE
S172 RESET
S152 START
S122 MIC
S112 PINK NOISE (R)
S102 PINK NOISE (L)
S180 OPEN/CLOSE
S181 ※C.3
(START)
(UNDER)
(OVER)
(R.IN(L))
(R.IN(R))
(ERROR)
(MIC)
(FAST)
(FIXED)
(B)
(SLOW)
(REVERSE)
(E)
(A)
(SEA-LEVEL)
(STILL MEMORY)
(D)
(FLAT)
(SPE-ANA)
(PEAK HOLD)
(C)
(MEMORY)

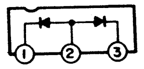
Frequency Control Switches

Freq. (Hz)		16	31,5	63	125	250	500	1K	2K	4K	8K	16K	32K
LEFT ch.	UP	S108	S118	S128	S138	S148	S158	S168	S178	S106	S116	S126	S136
	DOWN	S105	S115	S125	S135	S145	S155	S165	S177	S103	S113	S123	S133
RIGHT ch.	UP	S107	S117	S127	S137	S147	S157	S167	S175	S146	S156	S166	S176
	DOWN	S104	S114	S124	S134	S144	S154	S164	S174	S143	S153	S163	S173

※C.3
S181…. Switch for detecting drawer location with on states

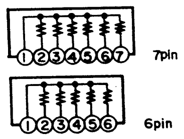

MA165
D030 ~ D036
RD5.6EB3 : D037
※ C. 1
MA154WA
LN01201C(Q)-(L)
: D001 ~ D007
D009 ~ D012
D022 ~ D024
TLUR163
D008, D010, D011
D013 ~ D021
7pin
6pin
※ C. 2 EXB-P8622IJ
EXB-P8547IJ
2SA1015(O) : Q001
14pin
TC4013P
: IC004, IC005
UPD4081BC
: IC006
16pin
BA823
: IC001, IC002
8pin
AN6914
: IC003
9pin
BA6208 : IC007
BA6208
NC
Bin
Ain
NC
GND
+Vcc
Bout
Aout
NC
TC4013BP
VDD
Vss
UPD4081BC
VDD
Vss
BA823
Vcc
DATA INPUT
GND
GND
Ō0
Ō1
Ō2
Ō3
STROBE INPUT
SHIFT PLUSE
DATA OUTPUT
GND
Ō7
Ō6
Ō5
Ō4
AN6914 ※Open Collector Outputs
Vcc
GND

※ C.1 DIODE ARRAY



(D113, D110), (D042, D045), (D052, D055), (D062, D065),
(D072, D075), (D082, D085), (D092, D095), (D102, D105),
(D112, D115), (D040, D043), (D050, D053), (D060, D063),
(D070, D073), (D044, D041), (D054, D051), (D064, D061), (D074, D071), (D084, D081),
(D094, D091), (D104, D101), (D114, D111), (D083, D080), (D093, D090), (D103, D100)

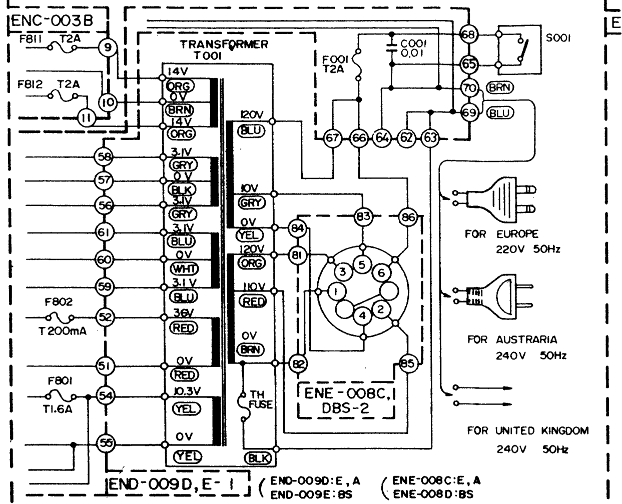
※C. 2 RES. ARRAY (X type)
7pin - 220Ω x 6
(R020, R027, R015, R029, R010, R021)
(R018, R030, R026, R017, R014, R022)
6pin - 470Ω x 5
(R005, R008, R006, R012, R003)
(R001, R004, R007, R031, R016)



9-(8) Discription of Power Supply Section & Semiconductors Used

(E), (A), (BS)

(E) FOR EUROPE : ~220V 50Hz
(A) FOR AUSTRARIA : ~240V 50Hz
(BS) FOR U.K. : ~240V 50Hz

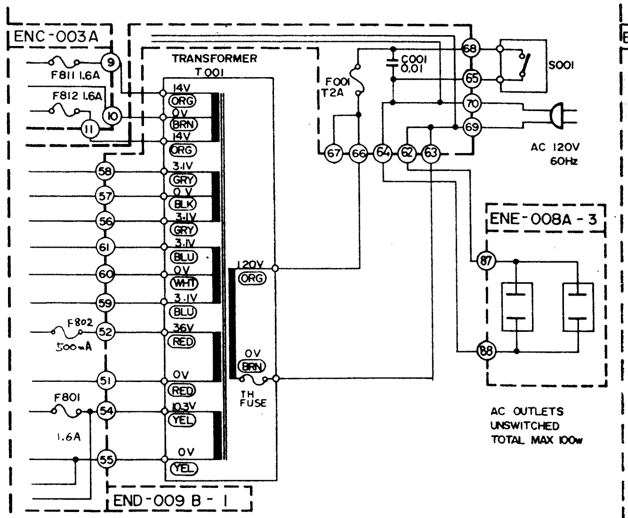

ENC-003B
F811 T2A
F812 T2A
TRANSFORMER T001
14V ORG
0V BRN
14V ORG
3.1V GRY
0V BLK
3.1V GRY
3.1V BLU
0V WHT
3.1V BLU
36V RED
0V RED
10.3V YEL
0V YEL
120V BLU
10V GRY
0V YEL
120V ORG
110V RED
0V BRN
TH FUSE
BLK
F001 T2A
C001 0.01
S001
BRN
BLU
F802 T200mA
F801 T1.6A
ENE-008C, DBS-2
FOR EUROPE 220V 50Hz
FOR AUSTRARIA 240V 50Hz
FOR UNITED KINGDOM 240V 50Hz
END-009D, E-1

(END-009D : E, A
END-009E : BS

(ENE-008C : E, A
ENE-008D : BS

(J), (C)

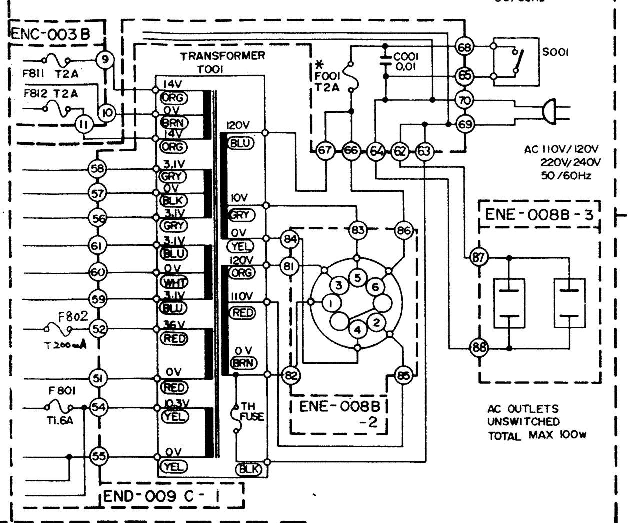
(J) FOR AMERICA AC120V 60Hz
(C) FOR CANADA AC 120V 60Hz


ENC-003A
F811 1.6A
F812 1.6A
TRANSFORMER T001
14V ORG
0V BRN
14V ORG
3.1V GRY
0V BLK
3.1V GRY
3.1V BLU
0V WHT
3.1V BLU
36V RED
0V RED
10.3V YEL
0V YEL
120V ORG
0V BRN
TH FUSE
F001 T2A
C001 0.01
S001
AC 120V 60Hz
ENE-008A-3
F802 500mA
F801 1.6A
AC OUTLETS UNSWITCHED TOTAL MAX 100w
END-009 B-1

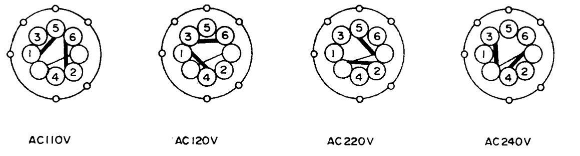
(U), (P)

(U) FOR OTHER COUNTRIES
(P) FOR PACEX

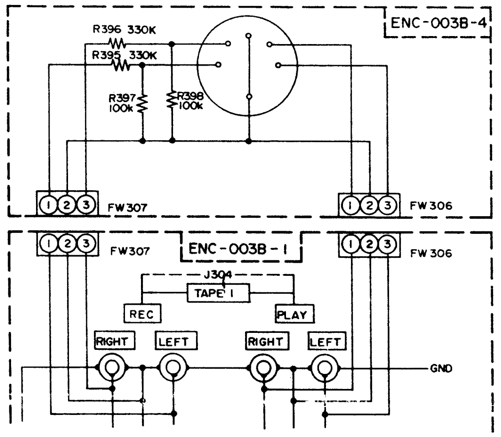
AC110V / 120V
220V/240V
50/60Hz


ENC-003B
F811 T2A
F812 T2A
TRANSFORMER T001
14V ORG
0V BRN
14V ORG
3.1V GRY
0V BLK
3.1V GRY
3.1V BLU
0V WHT
3.1V BLU
36V RED
0V RED
10.3V YEL
0V YEL
120V BLU
10V GRY
0V YEL
120V ORG
110V RED
0V BRN
TH FUSE
BLK
* F001 T2A
C001 0.01
S001
AC 110V/120V 220V/240V 50/60Hz
ENE-008B-3
ENE-008B-2
F802 T200mA
F801 T1.6A
AC OUTLETS UNSWITCHED TOTAL MAX 100w
END-009 C-1

VOLTAGE SELECTOR CONNECTION

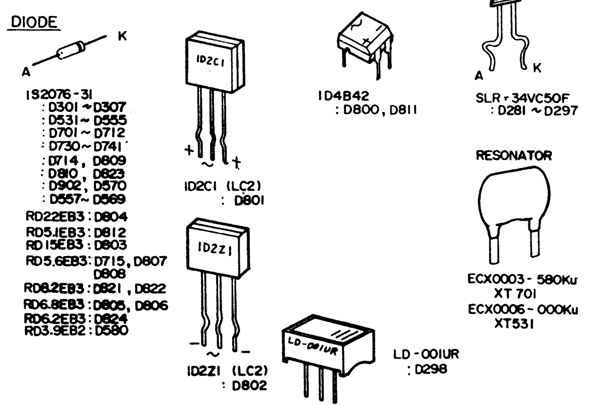

AC110V
AC120V
AC220V
AC240V

DIN CONNECTOR


ENC-003B-4
R396 330K
R395 330K
R397 100k
R398 100k
FW307
FW306
ENC-003B-1
J304
TAPE 1
REC
PLAY
RIGHT
LEFT
RIGHT
LEFT
GND

TRANSISTOR , IC, RESISTOR ARRAY, RESONATOR AND DIODE LEAD IDENTIFICATION

DIODE


A
K
ID2C1
+
~
+
ID2Z1
−
~
−
A
K
LD-001UR

1S2076-31
: D301 ~ D307
: D531 ~ D555
: D701 ~ D712
: D730 ~ D741
: D714, D809
: D810, D823
: D902, D570
: D557 ~ D569
RD22EB3 : D804
RD5.1EB3 : D812
RD15EB3 : D803
RD5.6EB3 : D715, D807
D808
RD8.2EB3 : D821, D822
RD6.8EB3 : D805, D806
RD6.2EB3 : D824
RD3.9EB2 : D580

ID2C1 (LC2)
: D801

ID2Z1 (LC2)
: D802

ID4B42
: D800, D811

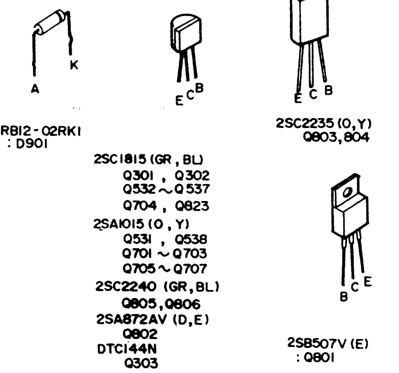
SLR-34VC50F
: D281 ~ D297

RESONATOR

ECX0003 - 580Ku
XT701
ECX0006 - 000Ku
XT531

LD-001UR
: D298

TRANSISTOR


A
K
E
C
B
E
C
B
B
C
E

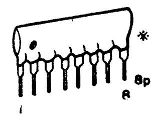
ERB12-02RK1
: D901

2SC1815 (GR, BL)
Q301, Q302
Q532 ~ Q537
Q704, Q823
2SA1015 (O, Y)
Q531, Q538
Q701 ~ Q703
Q705 ~ Q707
2SC2240 (GR, BL)
Q805, Q806
2SA872AV (D, E)
Q802
DTC144N
Q303

2SC2235 (O, Y)
Q803, 804

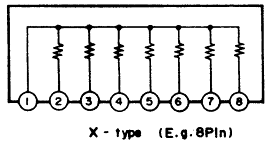
2SB507V (E)
: Q801

RESISTOR ARRAY

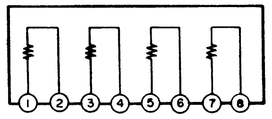


※ 8pin type - example.

5P ERGS4XK - 103
: RA536, RA537
6P ERGS5XK - 273
: RA711, RA712
ERGS3YK - 223
: RA706
7P ERGS6XK - 152
: RA701
ERGS6XK - 681
: RA702
ERGS6XK - 822
RA703
ERGS6XK - 392
RA704
8P ERGS4YK - 103
RA538
ERGS7XK - 474
RA401 RA404
9P ERGS8XK - 103
RA531, RA534
RA535
10P ERGS9XK - 103
RA705
12P ERGS6YK - 103
RA539 ~ RA541

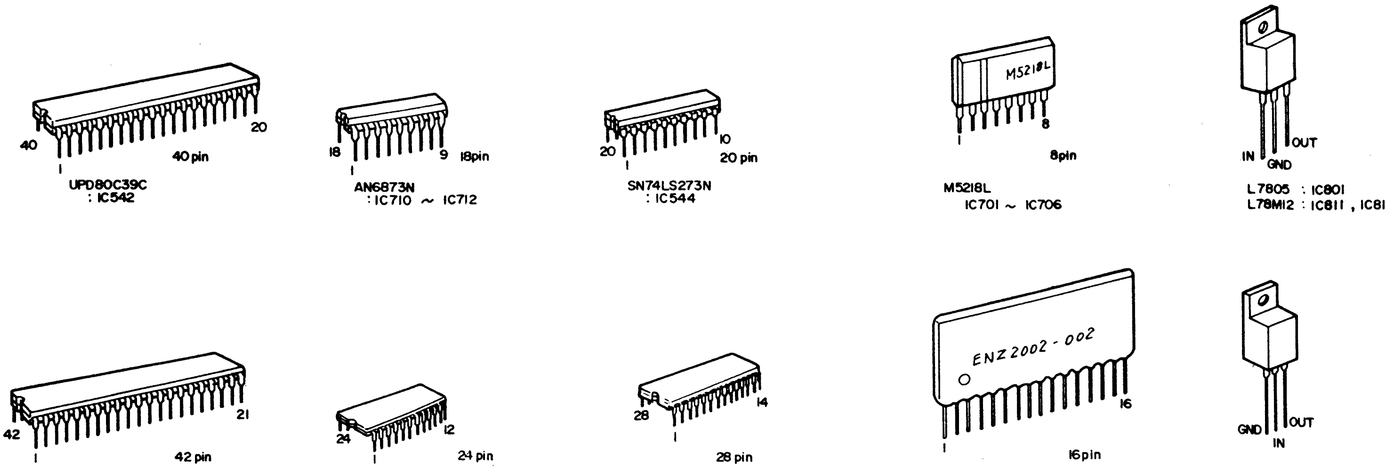


X - type (E.g. 8Pin)



Y - type (E.g. 8Pin)

IC


40
1
20
40 pin
18
1
9
18pin
20
1
10
20 pin
M5218L
1
8
8pin
IN
GND
OUT
42
1
21
42 pin
24
1
12
24 pin
28
1
14
28 pin
ENZ 2002 - 002
1
16
16pin
GND
IN
OUT

UPD80C39C
: IC542

AN6873N
: IC710 ~ IC712

SN74LS273N
: IC544

M5218L
IC701 ~ IC706

L7805 : IC801
L78M12 : IC811, IC812

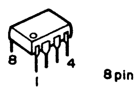
UPD1511AC - 039
: IC707

UPD2732D - 001
: IC543

LM835N
: IC403, IC404

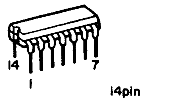
ENZ 2002 - 002
: IC715

UPC7912H
: IC813

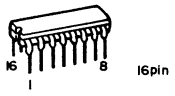


NJM4560D-X
IC405 ~ IC416
IC552 ~ IC554
IC304, IC547
IC722, IC723
IC562, IC306

LM833N
IC301 ~ IC303
IC401, IC402
LA6393D : IC546
MM5437N : IC305



SN74LS38N
: IC561
TC4069UBP
: IC538, IC539
TC4081BP
: IC530, IC531
TC4066BP
: IC307, IC541
: IC548, IC549
: IC724
TC4011BP
: IC532 ~ IC535
: IC558, IC721
LA6339
: IC551
SN74LS00N
: IC540, IC559
: IC560
TC40H000P
: IC536



SN74LS138N
: IC708, IC709
TC4051BP
: IC563, IC713
: IC714, IC720
BA823
: IC555 ~ IC557
TC9153P
: IC550
TC4050BP
: IC545